

# THE SCHOOL REVIEW

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## Educational News and Editorial Comment

### THE REORGANIZED NATIONAL EDUCATION ASSOCIATION

The reorganization of the National Education Association is an accomplished fact. The plan which creates a house of delegates and substitutes this for the general meeting where all members present have a vote was first presented to the association at Pittsburgh in 1918. It did not seem wise to the friends of the measure to risk a vote at the Pittsburgh meeting. In 1919, at Milwaukee, the plan was opposed by the representatives of New York and the representatives of the Teachers' Federation on the ground that it is out of harmony with the charter of the association, and also on the ground that the system of allotting delegates does not give adequate recognition to teachers. The 1919 meeting blocked the plan but voted to ask Congress for authority to change the charter of the association.

The meeting of 1920 was organized by the friends of the plan with a view to insuring its adoption. The consent of Congress to modify the organization had been secured in the interval since the Milwaukee meeting. The place of meeting was chosen far enough away from the great centers of population so as to make it quite impossible to pack the meeting. The people who went to Salt

Lake City went because they were intent on business. There were not many of them there, but they were compactly organized and they accomplished their purpose. The plan was adopted as originally proposed.

The opponents of the plan fought against adoption, but their opposition was of no avail. In fact, it had no real strength. Miss Margaret Haley, who more than anyone else blocked the measure at Milwaukee, was at Salt Lake City. She had the floor practically every time that she claimed it. She opposed the plan in general and in detail, but chiefly on the ground that it is dangerous and likely to lead to the domination of the teaching profession by someone who ought not to dominate it. This vague someone seems to be typified by the state superintendents, who were made ex-officio members of the house of delegates. The first and most vigorous effort to stop the plan centered on the proposal of seating state superintendents as delegates.

There has been much criticism of the officers of the National Education Association for moving the meeting to Salt Lake City. The adequate answer, however, is to be found in the record of packed meetings of recent years, beginning with the Boston meeting and ending with the Milwaukee fiasco, where a body of voters, supposed to be professional teachers, voted in blocks after arriving on special trains for no purpose other than political control of the association.

On the whole, it is well that the association was taken away from the possibility of being packed, and it certainly did wisely in turning itself into a representative organization rather than a town meeting.

The new plan adopted at Salt Lake City is as follows:

## ARTICLE II. ELECTION OF OFFICERS, REPRESENTATIVE ASSEMBLY AND AFFILIATED ASSOCIATIONS

SECTION 1. The election of officers and transaction of business at the annual meeting shall be by a representative assembly composed of delegates apportioned, elected and governed as hereinafter provided.

SECTION 2. The president, vice-presidents, treasurer and directors of the association shall be chosen by the representative assembly by ballot, at the annual business meeting, a majority of the votes cast being necessary for a

choice. They shall continue in office until the close of the annual meeting subsequent to their election, and until their successors are chosen, except as hereinafter provided. The secretary and treasurer shall enter upon their duties at a date which shall be determined by the board of trustees and which shall not be later than the first of October and shall continue in office during the terms for which they are separately chosen and until their successors are duly elected.

SECTION 3. The state teachers' association or educational association of a state, territory, or district, may become affiliated with the National Education Association and shall be designated an affiliated state association. Each affiliated state association shall be a state unit in the organization of the National Education Association and as such shall be entitled to representation in the representative assembly as hereinafter provided. The annual dues of an affiliated state association shall be \$10 for each delegate to which said state shall be entitled, with a maximum of \$100. Said association shall receive without application, or other condition, all regular publications of the National Education Association, including the volume of proceedings, reports of committees, and all special bulletins and announcements when issued.

SECTION 4. A local educational association or teachers' organization within a state, territory, or district, may affiliate with the National Education Association and shall be designated an affiliated local association. Each affiliated local association shall be a local unit in the organization of the National Education Association and as such shall be entitled to representation in the representative assembly as hereinafter provided. The annual dues of an affiliated local association shall be \$5, which shall entitle said association to receive without application, or other condition, all regular publications of the National Education Association, including the volume of proceedings, reports of committees, and all special bulletins and announcements when issued.

SECTION 5. Each affiliated association, both state and local, shall be furnished a certificate of membership and shall be entitled to the active assistance and support of the National Education Association in promoting the interests of such affiliated association and its members in so far as such interests come within the purpose and object of the National Education Association as set forth in its charter. The secretary of the National Education Association shall, with the advice and approval of the executive committee, make such arrangements for mutual co-operation between the National Education Association and the state and local affiliated associations as will promote the welfare of all and advance the interests of the teaching profession.

SECTION 6. Each affiliated state association shall be entitled to elect one delegate and one alternate to the representative assembly for each 100 of its members, or major fraction thereof, who are active members of the National Education Association, up to 500 such active members, and thereafter one delegate and one alternate for each five hundred of its members, or

major fraction thereof, who are active members of the National Education Association. Such delegates shall be designated state delegates.

SECTION 7. Each affiliated local association shall be entitled to elect one delegate and one alternate to the representative assembly for each 100 of its members, or major fraction thereof, who are active members of the National Education Association. Such delegates shall be designated local delegates.

SECTION 8. Only active members of the National Education Association shall be eligible to be delegates to the representative assembly, and to vote in the election of delegates in a state or local affiliated association. An active member shall be permitted to vote for the election of delegates in but one affiliated local association.

SECTION 9. The officers of the National Education Association as named in the charter and the state superintendent or commissioner of education of each state, territory, and district, shall be ex-officio delegates to the representative assembly. The president of the association shall preside at the annual meeting of the representative assembly and the secretary of the association shall keep the records thereof. In case of a tie the president shall cast the deciding vote.

SECTION 10. Delegates shall file their credentials with the secretary of the association on blanks furnished by him for that purpose not later than ten days before the beginning of the annual meeting. The secretary shall turn over such credentials to the credential committee, when appointed, with such information thereon as may be obtained from the records of the association. The representative assembly shall be the final judge of the qualifications of delegates. The delegates shall have equal rights and each shall have one vote. Meetings of the representative assembly shall be open to the active members of the association who shall be privileged to address the assembly on subjects pertaining to the association. The representative assembly shall adopt rules of procedure which shall not conflict with the charter and by-laws of the association. It shall recommend an equitable plan for paying the expenses of delegates to the annual business meeting of the association.

#### PRESIDENT HUNTER

The reorganized National Education Association selected as its first president Superintendent Fred M. Hunter, of Oakland, California. This is a wise beginning. Mr. Hunter is a vigorous, independent, strong organizer and entirely competent to manage the association. It is to be hoped that he will manage it as he has been elected to do. He is strong enough to escape domination by the political forces which during the last few years have controlled the National Education Association and nearly wrecked it.



There is a place for a broad, free, professional association of American educators. There is large work for such an association to do, but it cannot do this work if the whole attention of the organization is centered on logrolling.

There were days when the National Education Association was the center of great educational reforms, proposed and formulated by leaders in American thought. If Mr. Hunter can restore the association to the position that it had in those days he can make a name for himself and for his administration. To the thinking of many a member of the association the way to accomplish this end is to set the association collecting the information which will contribute to educational reconstruction of a rational type.

For example, we do not have at the present time adequate knowledge of public resources which can be drawn on for the support of the larger educational program which we all hope is coming in this country. Thoughtful administrators know that funds must be found or schools will suffer. Cannot Mr. Hunter be persuaded to organize a commission of really national scope to work on this important problem?

Again, the school curriculum is in urgent need of reconstruction. The old system of an eight-year elementary school is disintegrating and there is no national agency to guide in the reorganization of the seventh, eighth, and ninth grades. Cannot Mr. Hunter breathe some professional life into the politics-ridden body of the National Education Association by attacking this truly professional problem?

Once more, the problem of a truly efficient merit system for the appointment and promotion of teachers needs at the present time some strong intelligent champion. There are demagogues among us who are trying to undermine the profession of teaching by a destructive process of elimination of all supervision. There are those who curry favor with teachers by talking about the inadequacies of all central control. Why not face the issue squarely and deal with it rather than wait for the slow process of natural evolution with its inevitable waste of effort and years?

Mr. Hunter has come into leadership at a time when leaders are needed. He is welcomed by the profession, which looks to

him for large accomplishments. He will be supported in any move he will make toward setting up an intelligent, efficient, professional organization.

#### POLITICS AND SCHOOLS

The two greatest cities of this continent present at this time a sorry spectacle of educational systems under the complete domination of politics. The Board of Education of New York City at its July meeting refused to re-elect Dr. Tildsley associate superintendent. This act was carried through at the behest of Mayor Hylan without the assignment of any reason and by the votes of Mayor Hylan's appointees, cast solidly in opposition to the votes of the members of the board not appointed by the present mayor. A letter from one of the best-informed school men in New York City makes the statement to the editors of the *School Review* that this is notice to all associate superintendents that their positions will be secure only if they stand and deliver political spoils to the city hall.

The board has overdone its political interference with the school system, even to the extent of losing the support of those who were unfriendly to Dr. Tildsley. This is shown by the fact that the Teachers' Union issued through its president the following statement:

The Teachers' Union is gratified at the elimination by the board of Dr. John L. Tildsley from the dangerous position of educational autocrat over the thinking of teachers. However, gratified as we were at the result, we find ourselves in disagreement with the method whereby the result was achieved. We do not approve the action of the board in practically dismissing educational officers without so much as a frank statement to the public of the reasons for the dismissal.

The Teachers' Union, as one of our correspondents explains, is a small organization of the most radical teachers. It has defended all of the teachers against whom Dr. Tildsley has, from time to time, made charges, including those of proved communistic and bolshevist principles.

Certain it is that in its refusal to re-elect Dr. Tildsley the New York Board aimed a blow at one of the strongest men in the system. Dr. Tildsley has carried out without fear or hesitation

administrative measures which were necessary to the maintenance of professional standards among the teachers of New York. He has also been a leader in the organization of legislation for the improvement of teachers' salaries and for the betterment of the conditions under which teachers work. His vigor and clear-headed energy make him unacceptable to Mayor Hylan. So he goes.

The pathetic fact in such a situation is that the teaching profession of the United States is absolutely helpless to meet an affront of this kind with any adequate defensive action. We are all insulted by this act. We are all curtailed in our rights in the person of our colleague, Dr. Tildsley, but we can do nothing but talk about it.

The reason why we are helpless is that we have squandered our organizations on petty factional politics or we have refused to set up professional standards that the country can respect.

The case of Chicago is in some respects worse than that of New York. Here there was a conspiracy to oust Superintendent Chadsey, and the conspiracy worked successfully. The members of the Chicago Board of Education are under jail sentences and fines imposed by Judge Scanlan of the Circuit Court as a result of their conspiracy.

In delivering his decision Judge Scanlan used the following words:

Tested by said rule of evidence, it is clear and patent, in spite of the artful manner in which their answers have been framed, that each of the respondents found guilty was engaged in the conspiracy charged in the information, and that they performed covert acts in furtherance of the same, as charged in the information, and that said acts were calculated to prevent, frustrate and interfere with the operation of, and cause to be held for naught, the judgment entered in this court November 8, 1919, and to bring the authority and dignity of this court into disrepute, as charged in the information.

The prominence of the guilty respondents, all but one of them are members of the Board of Education of the City of Chicago, and that one is the attorney of said Board; several of them are lawyers, and therefore officers of the Court, the fact that the guilty respondents conspired together are circumstances that tend to aggravate the seriousness of the offense committed. Law and order will never prevail in this community while persons of standing and authority, like these guilty respondents, in concert of action treat with open contempt and disobedience the mandate of a court.

The guilty conspirators in this case have succeeded in their shameless and lawless design to prevent Dr. Chadsey from holding the office to which he was entitled under the law, and all that this Court can now do is to see to it that the guilty ones shall not go unwhipped of justice.

Counsel for the informant very strenuously contends that the evidence proves that the respondent Mortenson was a party to the conspiracy charged in the information. If, in determining the guilt or innocence of the said respondent, the answer of other respondents (for instance, the answer of respondent Bithers) could be considered, there would undoubtedly be merit in the contention of counsel. But where the question of the guilt or innocence of the respondent Mortenson must be tested only by his own answer, and that considered in the light of the rules of law that protect respondents in a case of this character, the respondent Mortenson must be found not guilty. That he had knowledge of the conspiracy to prevent Dr. Chadsey from holding the office to which he was legally entitled, and that he was perfectly willing that the conspiracy should succeed appears clearly. While legally he must be found not guilty, yet from an ethical and moral standpoint he presents the meanest figure in the case.

#### DORMITORIES AT PUBLIC HIGH SCHOOLS

Principal D. Lange of the George Weitbrecht Mechanic Arts High School of St. Paul raises in the following paragraphs a series of important questions which some of the readers of the *School Review* may be interested to discuss.

It seems to the writer that the public high school of the country will soon be confronted with the necessity of taking a somewhat novel step in the administration and equipment for students of secondary schools. I believe the time has come when in the larger cities of the country there should be at least one dormitory for high-school boys, and one dormitory for high-school girls.

In every large high school which has an enrolment of one thousand or more pupils, there are a number of boys and girls who for various reasons cannot live at home under the control of their parents or near relatives. Every high-school principal knows of good boys and girls whose mothers are not living, and whose fathers cannot give them proper attention. The result is that such pupils are generally poor students; they contract irregular, if not vicious, habits, and frequently have to be placed in private schools, when the father would much prefer to have them attend a public school in his home town.

Then there are likely to be, especially in the western and central western cities, a number of pupils, both boys and girls, who come to the city from the country districts, sometimes hundreds of miles away. In some cases these

pupils live with relatives who generally have little or no control over them. I have in mind one case of that kind. A boy about seventeen years old, whose parents lived on a farm in one of the neighboring counties, had to work. He associated with vicious companions and came home at all hours of the night. My warnings to the boy had no effect. One night he came home under the influence of liquor. The result was that I had to write his parents to come and take the boy out of school and take him home.

Another boy who came to this school from South Dakota paid his own way by working for a telephone company at night. He occupied a room in a rooming house with a man. The man slept in the room while the boy was at school, and the boy slept while his roommate was at work.

In another case a teacher came to me and said: "One of my boys has no place to sleep tonight. He has been living with his old grandmother but she has grown so feeble that she will be taken to the hospital today and the boy has no place to go for the night."

This boy was an orphan who paid his own way by carrying papers. I went with the boy personally to the Y.M.C.A. and secured a room for him where he is very comfortable and has been living now for about two years. I think, however, that even the Y.M.C.A. or Y.W.C.A. cannot give to pupils of high-school age the kind of attention which they ought to have. The solution would be high-school dormitories.

A high school located near the industrial district of a city should have a dormitory for boys and another high school should have a dormitory for girls. The dormitory should vary in size with the demands of the city. As most schools have a cafeteria, they would have to serve only two meals. The boys' dormitory ought to be in charge of a married teacher, and the girls' ought to be in charge of a competent matron. It would seem most desirable to have a dormitory, not directly connected with the school building, but conveniently near the building.

I believe that the lack of high-school dormitories turns a considerable number of students away from the public high schools, whose parents wish to send them there, and they ought to be enabled to send them. Under present conditions it forces boys and girls of high-school age to live under surroundings which are not favorable for good study nor conducive to the formation of high moral ideals. If possible, these dormitories should be self-supporting, the parents paying board and room and other necessary expenses. I believe, however, that we should have such dormitories even if they are not self-supporting, for we all agree that it is a much better policy, economically and socially, to prevent young people from going wrong than to attempt to reform them after they have gone wrong.

I should be very much interested to know the opinions and the experiences of other high-school men on this question. It might be very desirable for the *School Review* to secure and publish statistics bearing on this matter.

SOCIETY OF COLLEGE TEACHERS OF EDUCATION  
STATEMENT OF THE SECRETARY-TREASURER, FEBRUARY,  
1919, TO FEBRUARY, 1920

*Receipts:*

Cash (and bonds) on hand February 25, 1919.....	\$720.92
(See page 311, <i>School Review</i> , April, 1919)	
Interest on \$300 bonds, April 15 to September 15.....	12.45
Sale of 24 separates, or yearbooks, at 25 cents.....	6.00
Membership fees, 227, at \$2.00.....	454.00
	<u>\$1,193.37</u>

*Expenditures:*

Telephones (Marshall Printing Company).....	\$ .30
Telegrams (Waldo, Thurston, \$1.43; Kelly, Anderson, \$1.20; Graves and reply, \$2.96).....	5.59
McIntosh lantern, Chicago meeting.....	15.00
Stamps.....	18.53
Addressing and proofreading.....	7.25
Annual dues statements printed.....	5.50
Large envelopes for Yearbook, Campbell-Johnson Company..	2.88
Refund, Robert A. Cummins.....	2.00
Educational Monograph, 1920.....	145.00
Committee Expenses:	
D. A. Anderson.....	136.60
H. W. Nutt.....	18.61
A. R. Mead.....	5.50
J. E. Butterworth.....	1.20
J. H. Minnick.....	47.00
Argus Enterprise Inc.—Lantern at Cleveland.....	10.00
Drayage on Yearbooks.....	.50
	<u>\$421.46</u>
Carried forward March 1, 1920.....	\$771.91
(\$300.00 in Liberty Bonds)	

G. M. WILSON, *Secretary-Treasurer*

Audited and found correct.

CHARLES H. JUDD, *Auditing Committee*

SUMMARY FOR FIVE YEARS

	Receipts	Expenditures	Balance
1915*.....	\$ 50.53	.....	\$ 50.53
1916.....	209.55	\$ 73.41	186.67
1917.....	253.00	166.88	272.79
1918.....	426.25	124.38	574.66
1919.....	360.77	214.51	720.92
1920.....	472.45	421.46	771.91

\* Received from C. Alexander

G. M. WILSON,  
*Secretary-Treasurer, 1915-20*



## NEWS ITEMS FROM SECONDARY SCHOOLS

## EARNING THE SCHOOL EMBLEM

*Ben Blewett Junior High School, St. Louis, Missouri.*—The "B" is awarded in three phases of school life, scholarship, citizenship, and extra-school activities (which include athletics). In each of these three lines of endeavor there are three degrees of achievement. The first award in each case is a bronze button which may be won at the end of the first half-year at Blewett. It is possible for pupils to win all three bronze buttons at the end of the first half-year. A silver button may be won at the end of another half-year in any line which a pupil has previously won a bronze "B." The felt letter "B" is awarded for the third attainment in each case. The buttons and letters are different in design according to whether they are awarded for scholarship, citizenship, or extra-school activities.

To win the "B" in scholarship a pupil must receive a grade of A for a half-year in 85 per cent of his studies in which he recites as often as  $2\frac{1}{2}$  times a week. His citizenship grades must be satisfactory.

To receive the "B" in citizenship a pupil must have satisfactory grades in scholarship (an average of C); he must be recommended by four teachers as an exceptionally good citizen of the school (and must not be objected to by any teacher); and he must be approved by the congress of his grade.

To receive the "B" in extra-school activities a pupil must have satisfactory grades in citizenship and in scholarship; he must not receive a grade lower than "B" in gymnasium if he is a candidate in athletics; and he must be conspicuous as a leader in club work, athletics, or in some other extra-school activity.

Below are listed the requirements for the "B" in athletics.

For a boy they are as follows:

1. In football, basket-ball, and baseball he must play three full games and be recommended by the coach.
2. In track he must win during two consecutive half-years a total of fifty points in the various track meets. Points are awarded in meets as follows:

Grade	Intergrade
First—5 points	First—10 points
Second—3 points	Second—6 points
Third—2 points	Third—4 points
Fourth—1 point	Fourth—2 points
Interscholar	Interscholastic
First—20 points	First—40 points
Second—12 points	Second—30 points
Third—8 points	Third—20 points
Fourth—4 points	Fourth—10 points

The cross-country is a single race. Twelve places are awarded, provided at least fifteen boys run. First counts twelve points, second eleven points, etc.

Members of winning teams in relay races are also awarded from one to five points each.

3. In golf a boy must be the winner of the school tournament and there must have been at least ten competitors.

4. In tennis he must have been the winner of the singles or one of the pair who won the doubles, and there must have been ten competitors in the singles and twelve in the doubles.

5. The "B" will be awarded to boys who complete in two consecutive half-years any four of the following sets of performances:

a) Practicing faithfully during the season with the school football, basketball, or baseball team.

b) Being a member of an athletic team which wins the championship of the seventh, eighth, or ninth grade.

c) Playing tennis on ten different days for at least one hour and a half on each occasion.

d) Playing golf on ten different days for at least one hour and a half on each occasion.

e) Swimming on ten different occasions for one hour.

f) Ice skating on ten different days for at least one hour on each occasion.

g) Hiking on ten different days (outside of club work), going at least five miles on each hike.

h) Bicycling on ten different days (outside of club work), going at least ten miles on each occasion.

In order to win a "B" in this way a boy must not make a grade lower than B in gymnasium; he must have satisfactory grades in citizenship and scholarship; and he must fulfil the requirements during the school term.

The requirements for the "B" for a girl in athletics are as follows:

1. She must have a grade of at least B in gymnasium classes and her grades in citizenship and scholarship must be satisfactory.

2. She must complete in two consecutive half-years any four of the following sets of performances:

a) Belonging to an athletic team which wins the championship of the seventh, eighth, or ninth grade.

b) Playing basket-ball on ten different days during the season.

c) Playing tennis on ten different days for at least one hour on each occasion.

d) Playing golf on ten different days for at least one and one-half hours on each occasion.

e) Swimming on ten different days for one hour on each occasion.

f) Ice skating on ten different days for at least one hour on each occasion.

g) Hiking on seven different days, going at least five miles on each hike (club work not counting).

h) Bicycling on seven different days, going at least ten miles on each occasion.

i) Earning a grade of A on the Blewett Dancing Squad (which is not one of the Tuesday clubs).

*Junior Life*

## **News Items from the School of Education of the University of Chicago**

### **THE UNIVERSITY HIGH SCHOOL**

The High School of the School of Education took last year a number of forward steps, both in its organization and in its technique of instruction. For some years past the work of this school has been so related to that of the Elementary School, with which it is united, that pupils have advanced with a net economy of one year by omitting the eighth grade. During the past year the principles of junior high school organization have been further recognized and the highest grade of the Elementary School, in this case the seventh grade, has been taken into the High School.

In the school of youth thus distinguished from the elementary school, or school of childhood, no demarcation is drawn between junior and senior portions of the single high school. On the whole, the tendency is for the lower high-school grades, as thus constituted, to do rather difficult work, being careful to avoid conceptual types which require further experience, both general and special, and a higher level of maturity. In a word, the difference between earlier and later high-school studies is one of content rather than one of method or organization.

The High School thus constituted has five grades, VII-XI inclusive, and it should be observed that this is the result of several years of evolution rather than of any preconceived combination of grades, such as 6-3-3 or 6-2-4 or 7-2-3.

During the year the experiment of higher courses inaugurated some years ago has been continued and extended. Junior College courses in English, mathematics, and French have been offered to somewhat select groups of pupils in the eleventh grade with every apparent success. In English the courses offered are the regular introductory courses as given by the University, and pupils who have more than fifteen preparatory units and pass these courses are entitled to university credit for them. The mathematics

course includes more than the ordinary college Freshman mathematics and pupils of the same type passing the course receive university credit to the extent of two majors. The French department in the High School now offers work which is the full equivalent of eight majors in the University. During the year 1920-21 the social-science department will offer the introductory courses which are given by the University, and there is already a large election for the courses. The High School is also ready to offer the equivalent of three majors of Freshman science, but it is doubtful at this time whether this can be done in 1920-21.

A departure which is out of the course of secondary development, in that the proposal comes from the University Faculty, has been inaugurated for the coming school year. By vote of the University Faculty, on the initiative of the Romance Language Department, the High School will administer the regular Junior College courses of the first two, and probably three, majors in French and Spanish; and the University will not offer either French or Spanish 1 and 2. These courses, it should be understood, are for college students who enter without elementary Romance language and who wish to begin the study in college.

The improvements in technique of instruction which have been undertaken grow out of the conviction that any curriculum, however rich in content, is a mere paper contrivance until teaching by teachers and study by pupils get results of a type not commonly sought in schools.

The major effort in the High School during the year 1919-20 was upon the working out of a teaching technique and control calculated to make possible an entirely different conception of mastery on the part of pupils, substituting an ideal of great thoroughness for what is in practice in much modern education—showy superficiality. Some progress has been made.

For the next school year the High School is committed, as its major undertaking, to the working out of a system of crediting in which the possibility of a low passing grade is definitely repudiated and in which differences in credit will stand for concrete and tangible differences in amount and thoroughness of work done.

HENRY C. MORRISON

*Superintendent of the Laboratory Schools*

## CLASSIFICATION OF PUPILS IN ABILITY GROUPS

JAMES M. GLASS

Washington Junior High School, Rochester, New York

The principle of individual differences is applicable to all phases of human life. It can be demonstrated by some type of measurement in each phase. In the universal application of this fundamental principle mental endowment could not always escape. The accepted principles of Christianity raise moral distinctions above the possibility of human dispute, but no such condition exists in the measurement of individual mental differences. The science of psychology is furnishing the measurement. But, since psychology is not an exact science, controversy and question of the validity of intelligence tests are inevitable. Psychologists have been engaged in investigation of standards of measurement since Alfred Binet in 1908 gave the educational world his system of mental tests. Since that time psychologists have continued their experiments, have corrected and revised them in the light of experience, and are steadily approximating standardized types of scientific mental tests for both individual and group purposes.

Conservatism but not dogmatic opposition will be the safe guide in accepting mental tests as standards of measurement of individual mental differences; for the sake of ultimately safe standards of scientific determination, we must persist in our suspended judgment. We can, however, contribute to the evolution of safe standards by a tentative trial of mental tests to the end, among other purposes, of classifying pupils in ability groups. Such trials must be accompanied by the corrective influences of other types of measurement for classification, chiefly teachers' ratings. It is this study of the comparative and the mutual validity of intelligence tests and teachers' judgments which will be one of our chief contributions to the experimentation of psychologists. School administrators are today in a position to facilitate the progress of

educational psychology; we should earnestly, though conservatively, accept the opportunity. This is particularly true of the junior high school administration.

The junior high school stands as the earliest exponent of educational provision for individual differences. Its whole organization of differentiation, try-outs, trial, directed choice, correction of error, and educational and vocational guidance is founded upon the accepted principle of individual differences. Variations in abilities, aptitudes, and traits are accepted without question. The determination of such variations is a chief administrative responsibility and one of the most baffling problems pressing for solution. That the junior high school should provide for the classification of pupils in ability and other homogeneous groups is fundamental to its organization. Two of the unsolved problems of the junior high school are (1) the method of selection into ability groups and (2) the educational provisions made for the varying groups.

Until February, 1919, the Washington Junior High School placed incoming seventh-grade pupils in ability groups on the basis of the ratings made by the contributing elementary schools. For two years preceding the date named, one honor group of superior pupils was organized in accord with the recommendations of elementary schools, and on the same basis two groups of inferior pupils, called study-coach groups, were organized for remedial instruction in non-promotion or in trial-promotion groups. But the varying standards of teachers' ratings of seven contributing schools failed to produce a homogeneous honor group of superior pupils. The progress of the honor group was paralleled and at times exceeded by classes intermediate between the honor and study-coach classes. Invariably the classification of the low-seventh honor group was superseded in the high-seventh by frequently a 50 per cent shifting of pupils as originally classified. A new classification in the honor class became necessary when accomplishment in the junior high school was the sole method of selection. The break in the continuity of classification in the middle of the seventh year thereby largely invalidated the accelerated advance of the honor classes. Lack of dependable standards of measurement mainly accounted for this result.



On the other hand, in the study-coach classes, the prevention of repetition and the resumption of normal progress became, and still is, the chief objective. The ability of from 60 to 85 per cent of trial-promoted pupils and non-promoted pupils to regain a regular schedule is presumptive evidence that the chief factors in the temporary retardation were remedial and not constant. The percentage, however, of pupils who were permanently classified as of low mentality exceeded the proportion of very superior pupils as measured by the standards available prior to the use of psychological tests. Apparently the ability of teachers to detect low-intelligence pupils exceeded their ability to draw fine distinctions between the very superior, superior, and high average groups. It is probable that the very general study of remedial measures in the prevention of retardation which has prevailed since the publication of Ayres's book, *Laggards in Our Schools*, accounts in part for the greater skill in detecting backward pupils. At least, our own experience with study-coach classes has been far more satisfactory than the practical failure to organize honor groups which would persist beyond a term.

The first group tests were given during the term February-June, 1919, after the classification of pupils had been made by former standards. The purpose was to test the practicability of giving the tests to large numbers and to compare the results with teachers' ratings. The following tests were used: (1) the Chassell-Thorndike Graded Opposites Test (one test); (2) Pintner Survey Scale (five tests); (3) Otis Group Intelligence Tests (ten tests). Several interesting developments became evident: (1) There was no confusion in giving the tests; they were apparently as easily and naturally carried out as lesson tests by the classroom teacher. (2) Never more than one period was required. (3) There was no protest from teachers, pupils, or parents. (4) Pupils eagerly responded to the tests. (5) There was no serious strain or excitement evident. (6) Teachers looked upon the tests as good exercises in concentration and attention in addition to their primary purpose.

At the end of the term a comparison was made of the test scores and teachers' ratings covering the work of the half-year. The

comparison showed a satisfactory general correlation with a small percentage of disagreement; e.g., 94 per cent of the pupils rated by the tests as eligible to the highest group were given a promotion record of over 75 by the teachers' estimates, while only 30 per cent of the pupils who would have been classified by the tests in the lowest group received 75 by the teachers' ratings. In other words, about 6 per cent of the highest group would have become doubtful promotions, while 70 per cent of the lowest group would have been doubtful promotions. Conditions not measurable by intelligence tests very probably accounted for much of the discrepancy.

A further comparison was made between the Otis group test results and the Stanford-Binet individual test scores. The latter examinations were given to a small group of eight pupils who scored the highest by the Otis tests, to eight who ranked above and near the median, and to eight who made the lowest scores. No pupil in the upper eight received an intelligence quotient below 116; no pupil in the lowest eight had an intelligence quotient above 88. The intelligence quotients in all three groups showed practically the same range as existed in the original Otis tests. Briefly, the group tests survived the testing of this experimental term. The decision was therefore reached to try the mental tests as the sole basis of classification of entering Grade VII B pupils in September, 1919. For this purpose there were selected the Otis Group Intelligence Tests, the Terman Vocabulary and the Chicago Reasoning Tests.

There were two immediate objectives in this first application of mental tests as the method of selection: (1) correlation of test results with contributing school estimates, and (2) correlation with junior high school teachers' estimates.

There were nine Grade VII B classes—seven classes with full schedules and two study-coach classes with three-fourths of a schedule. The latter furnish the more significant comparison between contributing school ratings and test scores, while the former, the full-schedule classes, supply the more valuable data in the correlation of test scores with junior high school teachers' estimates.

The two study-coach classes were organized to include the sixty students who received the lowest scores in the Otis group tests.

As formerly, the contributing schools also recommended conditioned pupils for admission. There were forty-five such trial promotions; eighteen of these pupils were classified in study-coach classes by the mental tests, i.e., 40 per cent of the total trial promotions; the other 60 per cent, twenty-seven in number, were classified in the regular classes; at the close of five weeks, five of the latter were recommended by junior high school teachers for study-coach classification. To summarize, eighteen of the original trial promotions were classified for study-coach groups by the Otis tests, five were later similarly classified, or a total of twenty-three of the original forty-five trial promotions were in the study-coach class at the close of the first five weeks in the junior high school. This gives a 50 per cent correlation between the contributing school ratings and the Otis test scores as later corrected by junior high school estimates. Again, in the case of the twenty-two of the forty-five trial promotions who were admitted to full-schedule classes, both the mental tests and the pupils' ability to carry successfully a full schedule as determined by junior high school estimates warranted their classification in the regular classes. These were border-line cases between full and trial promotion, for whom it was apparently safer to trust to mental tests for classification. The cause of the trial promotion was not so much a question of native ability as of other contributing and remedial factors which disappeared under the stimulus to maintain the grading which the intelligence tests gave these pupils.

Finally, there was another group of thirty-seven pupils, recommended by contributing schools as full promotions, who, however, were placed in the study-coach classes by the intelligence tests. This latter group remained in the study-coach classes and were able to resume a full schedule only through special coaching. The question of mental endowment, of course, was alone measured by the group tests. Close application to the work of the contributing schools and the perfectly natural sympathy extended in recognition of effort account for their original classification as full promotions. Their further need for the individual attention of the study coaches was demonstrated by the test scores and their deferred classification in the regular classes. Apparently we may more safely depend upon

the composite results of two methods of selection checked by later classroom experience than upon either alone. Group test scores are evidently variable quantities to some degree, but we may seriously question whether they vary as greatly as teachers' estimates.

The correlation of test scores with junior high school estimates is very high in the case of the full-schedule VII B classes. The ranking order of these groups in ability classification was wholly determined by test scores. It is imperatively essential to note that the relative classification of these classes during the two terms of the current year was unknown to junior high school teachers. Only the experience of the classroom could demonstrate to the teachers the ability ranking of their pupils.

To eight teachers who had the largest number of VII B classes in their schedules the two following questions were submitted: (1) Do you feel that the VII B classes on your schedule are equal in ability or different in ability? (2) If different, how do you grade them?

Each of the eight answered the first question to the effect that there was a difference in ability. The code to the ranking order of the full-schedule classes which has not yet been revealed to the teachers is as follows: VII B 5-3-1-6-4-2, odd numbers ranking first in reverse order, and even numbers next in reverse order. The following is the ranking order given by the teachers, basing their judgments solely on classroom work. In some cases a teacher had two of the eight classes on her schedule, in others three, the science teacher four classes and the drawing teacher six classes.

First English teacher, three classes: VII B 3 "best group," VII B 1 "average," VII B 6 "poorest group": 100 per cent correlation of mental tests and teacher's judgment.

Second English teacher, two classes: VII B 4 "a little better mentality, but poorer in concentration" than VII B 2 "good workers, but not so quick." "Both sections do average work": 100 per cent correlation and correct analysis.

First social-science teacher, two classes: VII B 6 "better," VII B 2 "poorer," "decided difference": 100 per cent correlation, but not a wide range in difference. This teacher made the interest-

ing comment that "the classification was an advantage to the pupils because it brought out powers of leadership in those who would not exercise such powers were they classified with pupils much more capable than themselves."

Second social-science teacher, two classes: VII B 3 "a little superior; children show more native ability but they do not work any better than those in VII B 1. They show more initiative in doing extra work"; VII B 1 "a good group, too; it is hard to discriminate": 100 per cent correlation and a perfect analysis.

First mathematics teacher, three classes: VII B 5 "did the best work, 50 per cent of them did the maximum amount of work and could have taken a fuller course than that prescribed"; "VII B 4 and VII B 6 in order." This was a new supply teacher who properly classified the high group but made the slight error of reversing the ranking order of the two adjoining average groups.

Second mathematics teacher, two classes: VII B 3 "the superior," VII B 2 "very decidedly inferior." "They do the same amount of work, but they do it in a different way"; VII B 3 "will work out their own problems and like new work while VII B 2 have to be given much more individual help and the work has to be illustrated to a much greater extent": 100 per cent correlation and perfect analysis. These two classes were second and sixth in ranking order.

Science teacher, four classes, discovered about a 50 per cent correlation; "there is a difference, but I have them only twice a week for half periods."

Drawing teacher, six classes, ranked them as follows: VII B 5-1-3-4-6-2. She placed correctly the highest and lowest groups and in average groups she placed the second class third and the third class second in rank, the fourth class fifth and the fifth class in fourth place: perfect correlation for the highest, average, and lowest divisions.

The correlation of test results and teachers' ratings warranted the further use of tests as the primary method of selection. In February, 1920, the Otis tests were again used in classifying entering pupils. For the purpose of checking the results of one group of tests with another, the city's psychologist, Miss A. Leila Martin, gave the

Chicago group tests to the same classes in the middle of the term. The relative ranking of the classes as originally classified by the Otis remained unchanged as later determined by the Chicago tests. While this was true of the classes as integral units, the individual classification of pupils, however, was somewhat changed. For the sake of comparing the relative classification of individuals among the eight classes, the whole group was divided into quartiles. Two-thirds of the membership of each quartile as determined by the Otis remained constant in the Chicago tests, while one-third was distributed among the other quartiles; e.g., in the upper 25 per cent of students as classified by the Otis, two-thirds remained in this upper quartile and one-third were distributed through the second and third quartiles as classified by the Chicago tests.

Both groups of tests are, therefore, reliable only as rough sieves; they are not reliable for fine distinctions in individual grading. It was a clear case of group justice but individual injustice. Considered as perfect instruments, if the Otis is one, the Chicago is not; if the Chicago is one, the Otis is not. Yet there is no disagreement in the results which each is designed to give—a primary method of selection to be corrected by the later evidence of teachers' estimates, by additional group tests, or by individual testing. Again we were forced to the conclusion that only composite results are at all reliable.

In September, 1920, we shall use the Otis test and either the Chicago or the National Research Council tests, if the latter are available. A year or two longer may find us all using standardized group tests. This is greatly to be desired, for it will then be possible by pooling the results of country-wide investigations to reach more definite and dependable conclusions.

The second problem—the educational provisions for the varying groups—is even more debatable than the method of selection. The resources here are largely administrative, and methods of school administration are without end. The admission is made at the beginning that we are in a state of hopeful discontent with the present organization. At the time of the inauguration of the 6-3-3 plan, the consensus of opinion in Rochester was in favor of more thorough preparation in the junior high school to assure



educational advance into and through the senior high school or schools of equivalent rank. High-school subjects were introduced into the eighth year to supply a gradual deliberate approach, motivated by life-contacts, to the high-school curriculum. Enrichment rather than acceleration was the primary objective; prevention of elimination superseded, in our original purpose, the saving of time. Briefly, the former 50 per cent mortality between the eighth and ninth years of our school community was reduced to 8 per cent; a larger aggregate registration from this same community exists in the tenth year today than previously in the combined ninth and tenth years. The gain made hereby will argue strongly against any administrative purpose to accelerate. It remains yet for us to prove that, for a relatively small percentage of superior pupils, enrichment and acceleration are together consistent with the original purpose of assuring educational advance. As has been intimated, our one attempt at acceleration, through the organization of honor groups, was defeated by the lack of reliable standards of classification. When more dependable standards are evolved, we can safely undertake acceleration for a limited number. Our judgment today would be that provision for acceleration, on any general scale, should antedate admission into the junior high school. The great majority of experiments to this end have been made in the lower grades. The ratio of mental age to chronological age, or the intelligence quotient, is apparently with present standards of measurement more easily and possibly more reliably established in the elementary grades than it is in the upper grades. Early acceleration will accrue to the benefit of the child's whole educational career. Yet individual justice does demand deferred acceleration rather than no acceleration at all. Administrative plans, however, to provide correspondence of mental age with grade requirements have preceded, and it is still our belief rightly so, the junior high school period. Uniform acceptance of this policy will permit in the junior high school full opportunity for the functioning of its educational guidance by versatility of try-outs, finding, choosing, and testing choices. Primarily the junior high school is a transition school, first for educational guidance, and secondly to assure educational advance. The dominating purpose

for the great majority of pupils would seem, therefore, to demand enrichment of course rather than acceleration. In the absence of actual experience with successful opportunity classes to economize time, we can present only fundamental theory and not fact. After further experimentation with intelligence tests, we may launch a definite effort at acceleration, preserving at the same time strict compliance with enrichment for educational guidance and advance.

The classification of pupils in ability groups at present serves the purpose of organization of classes upon ability levels. Hereby the stimulus is presented to each individual to keep pace with his peers; he is removed from the discouragement of a comparison with the individual of superior powers and what is equally important he is spared the mental let-up and indolence consequent to a comparison with pupils at the other extreme. Ability grouping offers to each child the environment which demands the best there is in him, if he would maintain his place with his class. The realization of the twofold objective of educational guidance and advance is necessarily a matter of degree because of individual differences in mental endowment. By ability grouping the maximum attainment becomes possible to the superior pupils with gradations of attainment through the extent of the grouping. The degree of achievement is, therefore, consistent, as it should be, with the degree of ability. Thereby the junior high school functions in its mission of selecting, guiding, and advancing pupils capable of advanced training. Further, ability grouping contributes to the determination of that proportion of junior high school pupils who would waste time in high school or college but who should accept other opportunities provided by the junior high school differentiation. In both cases, ability groups have served educational guidance.

Between the two extremes of the highest and the lowest levels there is the large intermediate group of average ability for whom, beyond question, enrichment of every description should be provided. Again, ability classification serves the purpose of educational grading to assure correspondence of native endowment with educational and life aims. The most difficult administrative problems in wise guidance are found in this large average group.

Consequently, many diagnostic agencies in addition to intelligence tests and ability grouping must contribute to a safe solution of the problems of guidance for average groups. Here enter the home-room counselor, the expert services of a small group of specialists in guidance, informational data for each individual case and many other types of diagnostic study of variations in capacity, aptitude, personal traits, environment, and economic status—all of which are prerequisite to safe educational or vocational direction for the great majority. Ability grouping does not solve the problem here presented, but it does indicate the group where the problem exists.

The study-coach classes serve a triple function: (1) ability grouping, (2) remedial, and (3) preventive measures in the correction of retardation. The organization provides for three corresponding groups of children: (1) the trial-promotion group—those who by low scores in the mental tests are classified in the lowest ability groups; (2) the non-promotion group—pupils who have failed in one or more subjects (remedial); (3) the failure-prevention group—pupils who show indications of becoming subject failures at the end of the term (preventive). The study-coach classes are segregated from the regular organization. The program includes only the three major branches—English, social science, and mathematics—three out of four periods a day. Temporarily the pupil sacrifices special subjects of the fourth period upon which his promotion is not conditioned. This gain of one period a day presents the opportunity for special attention to the particular needs of each case. Here is the extra study period set aside for special study and coaching.

An illustration will explain the usual practice: A boy who has failed in VII B mathematics is given a VII A grade promotion but is placed in a VII A study-coach class. He will take VII A English, VII A social science, but VII B mathematics, all with study-coach teachers. In English and social science he will pursue the full course of study paralleling the advance of regular classes in these subjects. He will review VII B mathematics, "make up" the back work, "catch up" to the VII A advance, and then, after demonstrating his ability to "keep up" for a time, is transferred to the

full-schedule classes. The transfers of trial promotions and non-promotions from the study-coach classes create vacancies for the transfer of failure-prevention cases to the study-coach department. This facility of transfer furnishes the opportunity of shifting pupils, occasioned by the checking of mental test scores by classroom ratings and the correcting of group test scores by individual test scores.

R. L. Lyman in his recent article on "Washington Junior High School" in the *School Review*, March, 1920, in discussing the study-coach organization thus catches the spirit of ambition with which the study-coach classes arouse the unfortunates:

An essential feature of the organization is that pupils who have fallen behind, or even failed, go forward in spite of their failure. "Make up," "catch up," and "keep up" are the watch words. That is, an opportunity class with redoubled attention to supervised study and individual help, with many devices for awakening and stimulating ambitions and energies, holds before the laggards a triple aim. . . . A child who has once been put forward can very readily be kept up to standard both by the prospects of failure and by the experience of ability to succeed.

The study-coach department serves ability grouping in two ways: (1) Classification in the lowest ability groups. When continued classification in these lowest ability groups demonstrates the need of transferring individual pupils to the industrial or household departments, for vocational or trade training, the school's administrative machinery for educational and vocational guidance is brought to bear upon the individual case. (2) The study-coach classes facilitate reclassification as determined by corrective agencies applied subsequently to the original method of selection.

Ability grouping and general intelligence testing have not failed; they serve as very helpful aids in the administrative determination of pupils who should receive study-coach assistance. To retardation there are contributory causes other than inferior mental ability. Interest, social and home environment, physical endowment, emotional and other hereditary tendencies, nutrition, compatibility of teacher and pupil, perversion of social, moral, and recreational habits—these and many other contributory causes are the sources of the administrative problems of preventable failures—the inconsistencies of actual achievement and of potential capacity.

To repeat, study-coach classes are not an admission of the failure of intelligence tests and ability groups to function. By their very existence in a school administration, these special classes become a safe medium, in the application of remedial and preventive measures, to stabilize ability grouping. The study-coach organization becomes both an integral part in the organization of pupils in ability groups and a corrective influence in re-establishing classification for pupils who fail temporarily to keep pace with the ability group to which the mental tests assign them.

Fine distinctions in ability grouping by any or all methods of selection and later correction are dependent upon the aggregate number of ability groups possible. One grade class permits of no distinctions, two permit of some, five classes make a fivefold gradation, etc. Wherever practicable, therefore, it would seem advisable to cross-section each class into groups. Supervised study presents this opportunity. The divided period in supervised study provides for (1) a review of the preceding day's lesson, which is not merely recall but clarification and reorganization of ideas; (2) the assignment—the recognition of the lesson problem by the pupils, development by the teacher, and how-to-study instructions; (3) study of the lesson—the silent-study period under teacher supervision. It is in this third part of the divided period that three degrees of assignment are offered: the minimum assignment including the minimum essentials; the average assignment covering a broader investigation of the day's problems or more difficult variation of the problems; the maximum assignment inclusive of the minimum and average assignments and special related investigations of the day's lesson. This threefold assignment presents an additional stimulus to the best ability of each pupil. Ability grouping classifies by approximate mental levels, and supervised study, through its threefold assignment, permits finer distinctions in abilities in the case particularly of limited classification. It further furnishes the incentive of competition within the ability group.

Where the classification in ability groups is in sufficient numbers to produce mental levels of approximate equality the chief gain afforded by supervised study into a further division of minimum,

average, and maximum lies in the daily stimulus to maximum effort and in the fullest application of each pupil's whole capacity. Supervised study, therefore, has a place in any administrative plan in the classification of pupils in ability groups; first, because of the finer gradations it offers in a limited classification, and secondly, because in a less limited classification it promotes conformity of application with ability.

Summarizing, ability grouping is an administrative resource to promote the fundamental purposes for which the junior high school is established. Its chief virtue is that it demands a recognition of differences in individuals. It facilitates administrative plans in adaptation of curriculum requirements to individual capacity. It creates for each child an environment for the expression of his natural desire to compete with his peers. It avoids the discouragement of comparative incapacity and removes conditions tending to mental indolence. Since it serves to prevent, thereby, mental discontent, it becomes one of the main factors in the prevention of elimination. It stimulates the maximum of potential growth. It is an assurance of individual justice and, therefore, an educational square deal.



## OBSERVATIONS ON TWO LATIN VOCABULARY TESTS

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The *School Review* for December, 1919, listed four sets of standard vocabulary tests prepared by V. A. C. Henmon, of the University of Wisconsin, H. A. Brown, of the Oshkosh State Normal School, Dr. Paul Hanus, of Harvard, and Daniel Starch, of the University of Wisconsin, and J. M. Watters. Partly for the sake of seeing what light these tests would throw on the pupils' knowledge of Latin vocabulary, partly to get some idea, if possible, of the validity of the different tests, I arranged with the co-operation of the teacher of Latin to give these four sets to four classes in the week of February 3-10, 1920. A combination of circumstances prevented our giving the Hanus tests, and I have not as yet been able to get any standard scores or other information about the Brown test. Therefore this discussion is limited to the Henmon and the Starch-Watters tests. It may be said that the results of the Brown test indicate that it is more akin to those issued by Mr. Henmon than to that of Mr. Starch.

The Henmon and the Starch-Watters tests differ radically in composition. The Starch-Watters test comprises one hundred words selected, so the test states, "by choosing every twentieth word from Lodge's *Vocabulary of High School Latin*."<sup>1</sup> It is difficult to understand just how the words were arranged when this count was made. The list given does not include "every twentieth word" if one goes straight through the two thousand words of the vocabulary in alphabetical order, nor yet if one takes separately the vocabularies of the Caesar, Cicero, and Vergil years.

However, this is perhaps an unimportant question to raise, since undoubtedly the words do represent a random selection. The groups designated by Lodge as Caesar, Cicero, and Vergil words

<sup>1</sup> Gonzalez Lodge, *Vocabulary of High School Latin*, "Columbia University Teachers College Contributions to Education," 1915.

are proportionately represented; that is, there are fifty-one from the first group which contains one thousand words; twenty-four from the second, which contains five hundred words; and twenty-five from the third, which also contains five hundred words. Of the latter group only three occur in either Caesar or Cicero. This gives an opportunity to differentiate between the pupil who has studied Vergil and the one who has not. Since 60 per cent of the words in the first six books of Vergil do not occur in those portions of Caesar or Cicero covered by the Lodge list it is evident that a list of words common to all three authors is scarcely adequate to test the knowledge of fourth-year pupils. The one hundred words of this test occur in high-school Latin from four to five hundred and forty-five times each, the median number being fifteen times.<sup>1</sup> No scale values are assigned to the words. The test is scored only by the number of correct meanings given. The standard June scores are: first year, thirty-five; second year, fifty; third year, sixty-five; fourth year, eighty. There is nothing on the test sheet to indicate how the standard scores were arrived at.

There are five Henmon tests, A, B, C, D, and X. They are based on two hundred and thirty-nine words which are common to thirteen beginners' books and occur in all three of the writers ordinarily read in secondary schools, Caesar, Cicero, and Vergil. It is therefore conceivable, though unfortunately not probable, that if the tests are given in June, and the first-year pupils have used one of these thirteen books, every pupil might make a perfect score, a contingency which would be impossible with the Starch-Watters test. On the basis of results in nineteen schools (eight hundred and forty-seven pupils) each word is assigned a scale value for each year and also a general scale value for all years.<sup>2</sup> Thirty-nine words are discarded, including some difficult to score and others so easy that they were not missed at all by third- and fourth-year pupils. The remaining two hundred words are divided into four groups, making Tests A, B, C, and D. The sums of the scale values

<sup>1</sup> This count is taken from Lodge's *Vocabulary of High School Latin* already referred to, as are all other similar statements in this article. This vocabulary covers Caesar *B.G.* i-v; Cicero, *In Cat.* i-iv, *Pro. Arch.*, *De Man. Leg.*; Verg. *Aen.* i-vi.

<sup>2</sup> The *Journal of Educational Psychology*, VIII, 9, gives a complete account of the tests including the method of finding these scale values.

of the four groups are approximately the same and the tests are presumably of equal difficulty. Test X consists of twenty-five words chosen from the foregoing tests. These words are all of so nearly equal scale value that the difference is negligible and hence may be disregarded.

Mr. Henmon, in the article in which he describes the tests, says of these twenty-five words, "They are not too difficult for first-year pupils nor too easy for fourth-year pupils." Noting the frequency with which the words occur one can hardly refrain from thinking that if the latter part of this statement is true, it indicates an unfortunate situation in the Latin classes. Reference to Lodge's *Vocabulary of High School Latin* shows that the two hundred words occur from six to one thousand eight hundred and fifty times each in those portions of Caesar, Cicero, and Vergil which this vocabulary covers, with seventy-eight as the median number of occurrences; and that the twenty-five words of Test X occur from twelve to one thousand and ninety-six times with a median of sixty-three. Evidently mere frequency of occurrence counts for little if there is no definite effort to memorize. It is an interesting commentary on this fact as well as on the ineffectiveness of our teaching of Latin that the determinative pronoun *is*, which every pupil is supposed to learn in his first year and which he sees more than one thousand times in the next three years, should have the same scale value for fourth-year pupils as *cur* which occurs twelve times in the three upper years, *pax* which occurs thirty-six times, and *accipio* which occurs eighty-three times. If any words could be eliminated "because no third- or fourth-year pupils missed them," one might reasonably expect *is* to be one of that number. It is true that pronouns are notoriously difficult but surely not impossible. It would seem that the seven hundred and twenty-five occurrences in Caesar alone ought to be enough to put this into the "too easy" class. One wonders how even the most obtuse pupil manages to miss it. The standard June scores in the A, B, C, D tests, in percentage correct, are first year, 66; second year, 78; third year, 88; fourth year, 90. As one would expect from the fact that these words occur in each of the four years, these standard scores are considerably higher than those of the Starch-Watters test.

The tests were given on successive days to four classes in the following order: February 2, Henmon's A and B; February 3, C and D; February 4, X and the Brown test; February 5, Starch-Watters. The papers were taken up as soon as they were completed, no comment was made on them, and the pupils had no reason to suppose that the same words would recur in other tests. In fact there were few repetitions except that, as mentioned above, Test X is made up of words selected from A, B, C, and D. An examination of the papers showed that generally the pupils who mistranslated a word at all missed it both times. The classes were small, ranging from four to eleven pupils. The results, accordingly, are not conclusive in themselves. Of the sixty-four classes which Mr. Henmon tested, thirty-nine had ten or fewer pupils, and are fairly comparable from the standpoint of numbers with the classes in this investigation.

Before giving the results of the tests it may be well to state that the organization of the Latin course in the school where these tests were made differs radically from that of the average high school. The course in Latin covers six years. The usual work of the first year is spread over three years in the following way:

First year.....	2 half-hours per week, 30 weeks
Second year.....	3 half-hours per week, 30 weeks
Third year.....	9 half-hours per week, 30 weeks

making a total of two hundred and ten hours.<sup>2</sup> This includes absolutely all the time spent on Latin, study, and recitations. Nearly all the work is done under supervision, only two half-hours per week in the third year being allowed for home study. This is slightly less time than is given to first-year Latin in a school year of thirty-five weeks with a forty-minute daily recitation period and a study period of the same duration, an average time allowance. The other three years follow the usual course except that the amount of home study is always small.

The results of the tests are given in the following tables. Table I gives the median score for each class for Tests A, B, C, and D, together. It will be remembered that these tests are of practically equal difficulty, the total scale value of each being 107-108.8. Table II gives the scores for Test X. The *average* score is given for

the Vergil and Cicero classes because the cases are so few, four in each, and the scores so bunched that the term median ceases to have any significance. The median is used for the other two classes where there are ten or more cases. In Table II are included results from the same test secured in June, 1918, in another school, designated "School B." It will be easily seen that they are quite in

TABLE I  
HENMON TESTS A, B, C, D, 50 WORDS EACH

CLASS	VERGIL			CICERO			CAESAR			BEGINNERS' LATIN		
	No. of Words	Percent- age	Score Value	No. of Words	Percent- age	Score Value	No. of Words	Percent- age	Score Value	No. of Words	Percent- age	Score Value
Median score												
February, 1920.....	49.8	99.6	105.2	47.2	95	98.5	43.2	86.5	86.25	26.5	53	45.8
Standard June score.	45	90	97	44	88	95	39	78	84	33	66	71

TABLE II  
HENMON TEST X, 25 WORDS  
(Scale values are disregarded because approximately equal)

CLASS	VERGIL		CICERO		CAESAR		BEGINNERS' LATIN	
	No. of Words Correct	Percent- age Correct	No. of Words Correct	Percent- age Correct	No. of Words Correct	Percent- age Correct	No. of Words Correct	Percent- age Correct
School A, February, 1920.	24.5*	98*	23.5*	94*	22.5	90	14.5	58
School B, June, 1918.....	24.2*	96.8*	24.4*	97.6*	23.4*	93.6*	21.5	86
Standard June score.....	22.6	90.4	22	88	18.6	74.3	13.7	54.8

\* Scores thus marked are averages, the others medians. The actual scores in percentage made by the Vergil classes were: School A, 100, 100, 96, 96; School B, 100, 100, 100, 96, 92. Cicero class: School A, 100, 96, 96, 84; School B, 100, 100, 100, 96, 92. Caesar class: School B, 100, 100, 96, 92 (6 pupils), 88. In most cases the average and median were both computed and were rarely found to differ more than two points.

accord with results obtained this year. Table III gives the median scores on the Starch-Watters test for February and also for June when this test was given again. Because of the character of the scores obtained from the Henmon tests in February it seemed hardly worth while to repeat them. It should be noticed that the scores on the Henmon tests, except those for School B, are all

February scores and that they are compared with the Standard June score.

From an inspection of Tables I and II it seems probable that the Henmon tests are too easy to furnish a satisfactory scale. They provide means of discriminating neither between the better pupils of each class, nor yet between the better pupils of the different years, and moreover the standards for the several years appear to be too low. This is particularly true of Test X. On this test the median of the Caesar class of School A is almost up to the standard of the Vergil year. In School B, the average score of the Caesar class is above the fourth-year standard, and the median of the beginning class is above that of the Caesar year. The comparatively low score made by the beginning class in School A does not seem to

TABLE III  
STARCH-WATTERS TEST, 100 WORDS

Class	Vergil	Cicero	Caesar	Beginners' Latin
Median score, February, 1920.....	83	67	37.5	25.5
Median score, June, 1920.....	90	77	58.5	31
Standard June score.....	80	65	50	35

argue well for the more extended course. Another factor, however, should be considered, namely, that the class has not been using one of the "thirteen recent or most widely used beginners' books" on which the test vocabulary is based. In fact their work has been done for the most part without a book, and 25 per cent of the two hundred words were entirely unknown to them. On the basis of words which they were supposed to know the class made a median score of 70 per cent on Tests A, B, C, D, and 80 per cent on Test X. These scores are well above the standard. The question may still be raised whether the class has as large and well-selected vocabulary as it should. This will be considered again in connection with the results of the Starch-Watters test.

The criticism already made as to the lack of range of the Henmon tests is confirmed by the consideration of individual scores. In School A the Vergil class, out of a possible twenty scores on five

tests, made nine perfect scores; the Cicero class, three perfect scores out of twenty; the Caesar class, one perfect score out of fifty. It is evident that the second-year pupil who makes 100 on this test cannot have the same command of Latin vocabulary that the fourth-year pupil does who makes the same score. A comparison of the scores of four pupils who made 100 on Test X in February with their respective scores on the Starch-Watters test at the same time shows the advantage of the latter in obtaining a comparative rating.

Pupil No.	Henmon X	Starch-Watters
1 (Fourth year).....	100	91
2 (Fourth year).....	100	85
3 (Third year).....	100	72
4 (Second year).....	100	47

No one made a perfect score on the Starch-Watters test either in February or June. This test evidently gives some opportunity for the unusual pupil.

An inspection of Table III shows the median of the three upper classes well above the standard in June but the beginning class slightly below. This takes us back to the question already raised, whether this class has an adequate vocabulary. Results from the other classes which have come up under a similar plan of work indicate that there is at least no cause for alarm about their future. An examination of their papers reveals very few mistranslations. Their knowledge is accurate and dependable as far as it goes. It may not be amiss to ask whether it is legitimate to expect a score of thirty-five from first-year pupils. On the basis of the two thousand words in the Lodge list from which the words of the test are selected, this means a knowledge of seven hundred words. My own experience and observation in schools where there is a definite plan for teaching vocabulary are that it is very difficult for a beginning class to learn more than five hundred words and master the requisite forms and principles of syntax. On the other hand, the third- and fourth-year classes acquire vocabulary very rapidly when once they are thoroughly conversant with a rather limited list of simple words and with the principles of word building. For this reason the Starch-Watters scores for third and fourth year seem



low, and the June scores made by School A more nearly what ought to be required.

A comparison of scores on the Starch-Watters test with school rating shows that the results of this test indicate fairly well the relative rank of pupils. The exceptions fall into two classes. The first learn isolated facts easily but do not follow out a logical process of thought. In their own favorite phrase, they "know the words but cannot put them together." The other group is made up of pupils whose school rating reflects rather an attitude of persistent endeavor than actual attainment.

The improvement in the scores from February to June shown in Table III is undoubtedly due to the fact that it is the practice of the school to devote five minutes a day at certain periods of the year to vocabulary drill either taking up words that have been missed in prose and reading or else reviewing the vocabulary of the year as a whole. This practice has been found to yield valuable results in improvement in sight reading as well as in formal vocabulary tests. In the period between February and June the Vergil class reviewed Lodge's Vergil list, the Cicero class reviewed the Cicero list and about two hundred of the less common words from the Caesar list, and the Caesar class reviewed between seven hundred and eight hundred of the more common words of the Caesar list.

Quite aside from the matter of comparative scores a vocabulary test throws considerable light on the type of mistakes that must be guarded against. Such words as *otium* and *odium*, *concilium* and *consilium*, *tum* and *dum*, *mos* and *mors*, *ibi* and *ubi* are perpetual pitfalls for the careless and the unwary. Too much care cannot be taken to make such words permanent when they are first learned, for once a sense of confusion is established, the case is practically hopeless. In this same class belong the pronouns *quis*, *aliquis*, *quisquam*, *quisque*, and also *hic*, *ille*, and *is*. The former are confused because of the common element *quis*, the latter because of their similarity of meaning. Still more deplorable are the mistakes which show that the pupil has acquired some vague ideas but no exact knowledge. To translate *difficilis*, difficulty, *celer*, swiftly, *relinquo*, remainder, indicates either hopeless carelessness

or a lack of intelligence which should excuse the pupil from further work in this field.

The following conclusions may be drawn from the results obtained. The Starch-Watters test is a more satisfactory measure than Henmon's tests for a comparison both of classes and of individuals in a class. Most of the pupils tested were up to the standard score; many were above it. The lowest scores were made by the pupils who have just completed the first-year work. The fact that this work is done very informally and does not follow the usual methods is perhaps a sufficient explanation of this situation. It may be that the standard set is too high. At all events the record of the three upper classes indicates that the class is not likely to be handicapped.

The acquisition of an adequate vocabulary evidently cannot be left to chance nor can we depend on mere frequency of occurrence to fix correct meanings in the pupil's mind. Short periods of regular and definite drill with perception cards or printed lists show most satisfactory results.

## TRAINING FOR CITIZENSHIP THROUGH PRACTICE

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The particular phase of training for citizenship selected as the basis of this article is pupil participation or co-operation in solving problems of the high-school student body. Of late we have heard much about training for citizenship, preparation for citizenship, teaching Americanism, and inspiring pupils with patriotism. Everywhere the hope is expressed that the schools may turn out better citizens now than ever before, and yet no one knows just how the school may best meet this responsibility. Without this definite knowledge, it is far easier to theorize about how good citizens can be turned out as the product of the school than to accomplish this aim.

Some pin their faith to the teaching of history and civic problems. Undoubtedly an understanding of modern world-problems and an intimate contact with the social problems of today are very important factors in training for citizenship. The knowledge of modern world-problems is, indeed, an essential background to an understanding of the civic problems of today. More schools should emphasize modern history. Some wish to rely upon incidental instruction—the precept and example of teachers and prominent citizens of the community. Some depend upon the spirit built up through clean athletics and sports, fairness in play and in class conduct, while others rely upon the spirit of the recitation to do much for the pupils. Still others seek to teach citizenship through the general assembly and the spirit built up in such meetings. All of these and many other means are no doubt worth while and every such opportunity should be seized upon to teach citizenship, to teach the gospel of unselfish service, of fairness, of co-operation, and of individual responsibility in a democracy.

But one of the most profound means of teaching citizenship is through practice. If boys and girls are to respect and obey our laws and be tolerant toward those who must execute them, a genuine opportunity to solve school-citizenship problems is excellent training. This is not theory. No one can fail to be deeply impressed with the faithfulness with which pupils live up to rules of conduct which have originated in the student body, nor with the spirit in which pupils set about their job of handling a problem that has been really turned over to them. Pupils are at their best when they can be made to feel this responsibility.

In one high school in which the classes are organized in keeping with the spirit of student responsibility, teachers can leave their classes at any time without even asking the class chairman to continue the work. The chairman assumes his responsibility at once if he is present; if not, the class at once selects someone to take charge. I had occasion to drop in upon such a class one day. The teacher had gone on a necessary errand to another room. It was some moments before I discovered that the teacher was not in the room. The pupils noticing that I was looking for someone asked if I wished to see the teacher. They said he had left a few minutes previously and then continued their work.

Democratic citizenship implies just such personal responsibility and responsiveness to the duties and obligations before the individual and the group. A social point of view in the school is dependent upon a social atmosphere. This atmosphere is impossible without pupil responsibility at least to some degree. It cannot be manufactured, created, superimposed, or forced upon the student body from above. It must be as natural as the expression of social instincts in adult life and hence must spring from the student body itself.

Student participation in school government and in the solution of many of the problems of the student body is one means of training for the assumption of the duties and responsibilities of adult society. Student participation will help develop thinking; it will help develop obedience to and respect for our laws and customs; it will help foster the spirit of fair play and unselfish service. In short, it will help build up the strength of character and self-control

essential alike to a high type of school spirit and of real citizenship. After all, school spirit, whatever it is, and community spirit are but different aspects of the same thing. The one is just as genuinely a social matter as the other, with the same laws of society operating in practically the same way in both instances. The factors of control are much the same. Autocratic methods are resented as keenly in the one instance as the other. Injustice, partiality, and laxness in administration lead to the same inevitable ends in both cases. Brute force gets just about as far in the genuine conversion of the high-school lad as it does with his father. Self-control, respect for the rights of others, and real obedience to the mandates of the group must spring largely from within. Suppression is a thing of last resort. Therefore, if in the school we are to train for positive, upstanding citizenship in the community, we must place some responsibility upon high-school boys and girls for the solution of their school-citizenship problems. In other words, we must provide for the training of citizenship through practice.

Superintendent I. M. Allen, of Springfield, Illinois, has expressed most forcibly the necessity of practice in training for citizenship. In addressing the department of secondary education at the 1919 meeting of the National Education Association in Milwaukee, he said in part:

In Germany is illustrated a nation seeking to establish autocracy through a system of education. She succeeded. Is it possible for us through training in the schools to establish a co-operating democracy? Yes, but the task is more difficult than the education for autocracy. Training children to feel, think, and act co-operatively is more difficult than training children to feel, think, and act dependently. We shall not, however, despair because of the enormity of our task.

Primarily we must believe that the teacher is a self-directing, co-operating control machine placed in the school for the purpose of training similar machines to function. There will be many breakdowns in the school, and there will be times when the chief engineer will desire to switch back on to the old autocratic controls, but if he really understands himself, the machines intrusted to his care, and the purpose of the school he will be willing to blunder in the manipulation, to be disappointed in the day's quantitative output, because he is concerned, not in a product made in Germany, but in a product in the making in America.

This chief engineer is the American school teacher, and the wonderful, co-ordinating, co-operative, self-directing, and self-improving machines are American boys and girls in our public schools. The force that operates within such a school is the socializing force of democracy. If we really believe in it we shall operate our schools according to its laws. Our chief concern in the dawn of democracy is to discover its laws and then to apply them.

Student participation in school control is fundamental because of the inherent premium which democracy places upon the integrity of the action of the individual who thinks and wilfully acts with due consideration to those about him. It is fundamental because it implies co-operation

The word participation has been used purposely. Student participation is not to be confused with the traditional notion of self-government. Self-government schemes in American secondary schools have universally been failures or fakes. There may be a few exceptions, but these when investigated will be found to be in reality schemes in which the pupils are co-operating with the faculty.

Pupils have the right to the guidance and advice of the faculty in the solution of the problems of the corporate life of the school. To deny the pupils this right is to close one great avenue of training in citizenship. Rather should there be open and frank co-operation between pupils and teachers in matters of this kind. Pupils must assume the responsibilities of citizenship gradually, and to ask them to arise and walk before they have yet attained the necessary nicety of balance is to invite defeat.

Self-government as usually conceived and traditionally administered requires a most complicated machinery. Legislative, executive, and judicial departments must be provided and the intricacies of the system, together with the inability of pupils to exercise properly the executive authority, sooner or later make it mandatory that the authorities interfere, and this has always proved disastrous. Self-government creates a sort of barrier between pupils and authorities in the solution of student problems. If the authorities "dip" in, the pupils at once conclude that there is unwarranted interference and dominance. Self-government implies, of course, the creation of public opinion among the pupils,

but also a method of dealing with non-conformists. Ideally it presupposes the elimination of disciplinary cases, but among human beings the ideal is impossible of attainment. Therefore, self-government must concern itself with problems belonging properly to the faculty.

Student co-operation or participation, on the other hand, is built upon the theory of mutual co-operation between the faculty and the student body. The faculty feels free to work with the pupils, and pupils do not hesitate to consult the faculty. In doing so, there is no danger that the pupils will feel that the faculty is interfering. There is a mutual confidence and spirit of helpfulness back of the co-operation. Student participation implies the development of a favorable public opinion but not the responsibility of settling disciplinary cases, except as such cases can be settled through the contempt in which they are held by the pupils generally. Dealing with these cases remains primarily the work of the authorities. Participation in the sense in which it is used here leaves the pupils free to work constructively upon such problems as concern the student body generally. They are freed from the necessity of dealing with individual cases.

The machinery by which the pupils may co-operate with the faculty should be simple. There should be some sort of central organization or body with power of initiation with the advice of some member or committee of the faculty. This central body must have some means of direct access to the student body. If the school is organized on the home-room basis, then home-room representatives may become the means of contact with the pupils. There should probably be a constitution, simple in character, and designed rather to govern the methods of organization than to enumerate the powers and duties of the central body and home-room representatives. It should be free of legislative matters.

While the constitution now in force in the Lincoln High School has been found imperfect in some ways, it has served its purpose for about three years. It was developed in keeping with the views advanced in this article.



## CONSTITUTION OF THE STUDENT COUNCIL

## ARTICLE I—PURPOSE AND NAME

In order to foster the sentiment for law and order in the school, to provide opportunities for student co-operation in the internal government of the school, to promote worthy student activities and to promote the general welfare of the school, this constitution establishing the student government organization in the Lincoln High School has been adopted by the provisional student council and faculty committee on student affairs.

## ARTICLE II—FORM OF ORGANIZATION

The student-government organization shall consist of a home-room representative body and a student council.

## ARTICLE III—MEMBERSHIP IN THE STUDENT COUNCIL

SECTION 1. Membership in the student council shall consist of twenty members from the school at large, viz., six Senior boys and six Senior girls; three Junior boys and three Junior girls; one Sophomore boy and one Sophomore girl.

SEC. 2. The editor-in-chief of *The Advocate* and the captain of each athletic team shall be members of this organization. Each captain shall serve for twelve weeks.

SEC. 3. When the editor-in-chief of *The Advocate* is a boy, four Senior boys and six Senior girls shall be elected to membership. When the editor-in-chief of *The Advocate* is a girl, five Senior boys and five Senior girls shall be elected to membership.

SEC. 4. Eligibility requirements. (Eligibility requirements are the same as those for participation in interscholastic athletics.)

SEC. 5. Members of the student council shall, by virtue of their position, be members of the home-room representative body.

## ARTICLE IV—OFFICERS OF STUDENT COUNCIL

SECTION 1. The officers of the student council shall be a president, a vice-president, and a secretary.

SEC. 2. These officers shall hold office for one semester.

SEC. 3. When the president is a boy, the vice-president shall be a girl; when the president is a girl, the vice-president shall be a boy.

SEC. 4. The boy holding the highest office in the student council shall preside over all boys' meetings.

SEC. 5. The girl holding the highest office in the student council shall preside over all girls' meetings.

## ARTICLE V—ELECTION OF MEMBERS OF STUDENT COUNCIL

SECTION 1. Election of members of the student council shall be held within the first five weeks after the opening of school in September.

SEC. 2. A committee consisting of the principal of the school, two members of the faculty committee on student affairs and five members of the home-room representative body, elected by the home-room representative body, shall nominate thirty-six members of the school at large for membership in the student council.

SEC. 3. Members shall be elected by the school at large by ballot from the thirty-six nominations submitted by the nominating committee.

SEC. 4. Election shall be held not less than three nor more than five days after the nominations have been made.

SEC. 5. Ballots shall be counted in the office under the direction of the principal.

SEC. 6. The names of those elected to the student council shall be published at least three days before the election of officers.

#### ARTICLE VI—ELECTION OF OFFICERS OF STUDENT COUNCIL

SECTION 1. The president and vice-president of the student council shall be Seniors.

SEC. 2. Officers shall be nominated and elected at the first meeting of the student council, to be held within a week after the election of members.

SEC. 3. Nomination of officers shall be by ballot.

SEC. 4. Balloting for officers shall be continued until by successive elimination of the name receiving the smallest number of votes the highest shall have received a majority vote.

#### ARTICLE VII—MEMBERSHIP IN HOME-ROOM REPRESENTATIVE BODY

SECTION 1. Membership of this organization shall consist of one member from each Freshman, Sophomore, and Junior home-room group, and of three members from each Senior home-room group, and of all members of the student council including ex officio members.

SEC. 2. Members shall serve for one year or until their successors are elected.

SEC. 3. Members shall serve until the election of the succeeding home-room representative body.

SEC. 4. Eligibility requirements (same as for council members).

#### ARTICLE VIII—OFFICERS

SECTION 1. The officers of the student council shall be ex officio, the officers of the home-room representative body.

#### ARTICLE IX—ELECTION OF MEMBERS

SECTION 1. The election of members shall be by ballot.

SEC. 2. Election of members shall take place in home rooms, with home-room teacher in charge.

SEC. 3. Election shall be held during the first four weeks after the opening of school in September.

SEC. 4. Vacancies shall be filled by special election. Pupils elected to fill vacancies shall serve till the next general election.

#### ARTICLE X—AMENDMENT

SECTION 1. This constitution may be amended by a two-thirds vote of the home-room representative body, a two-thirds vote of the student council, the approval of the faculty committee on student affairs, and the approval of the principal.

SEC. 2. Amendments must originate either in the student council or in the faculty committee on student affairs and must be submitted first to the home-room representative body.

SEC. 3. A proposed amendment must be on the table one week in the home-room representative body before final action on it may be taken by that body.

#### ARTICLE XI—SOURCE OF POWER

Since the principal and faculty are directly responsible to the superintendent and to the Board of Education for the welfare of the school, it is expressly understood that all student powers, herein set forth, are delegated by the principal and faculty and may be revoked by them at any time.

#### ARTICLE XII—RATIFICATION

This constitution shall become effective upon ratification by the faculty committee on student affairs and approval by the principal.

#### ARTICLE XIII—RULES OF PROCEDURE

SECTION 1. The student council and home-room representatives shall have power to adopt by-laws and rules of procedure.

The constitution is going through the process of amendment, some eight or ten amendments being at the present time before the student-affairs committee of the faculty for approval or rejection.

It is one thing to discuss the advisability of having student participation and even to adopt it, but quite another to make it a success. The problem of making it operate effectively is by far the most difficult one which confronts the faculty. From the experience of those who have worked upon this problem some suggestions can be made not only in the matter of paving the way for student co-operation but in getting the council under way and insuring success to the movement.

First, the faculty must have faith in the plan. Together the principal and teachers should study the problem and arrive at an understanding or creed upon the subject. The fullest discussions possible and informal conferences between teachers and principal and among teachers themselves should be encouraged until everyone is convinced that the proposal is worthy of trial. In one high school the principal decided to try self-government in one of the study halls. The teachers did not support it and after one semester it had to be abandoned. The teachers have a perfect right to pass judgment upon any matter which may affect their work and the spirit of the school.

Second, the student body must be as fully prepared as possible for the innovation. This can be done to some degree in the home rooms by placing responsibility upon the pupils. The teachers will find many opportunities in the home room to further the idea. In the classrooms, class leaders can be encouraged to take charge of class work in the absence of teachers. In the assembly the principal has a rare opportunity to exploit his theory both in his methods of control and in his talks. Most high-school pupils yearn for freedom and release from what they call kindergarten methods. The principal cannot afford to lose the opportunity to confer with the natural leaders in the school. Ten or twenty such pupils committed to the idea can work wonders.

Third, after the way has thus been paved, it may be found quite expedient to call in a committee of perhaps six pupils, two from each of the three upper classes, and with their co-operation appoint a provisional council which shall, in co-operation with a committee of the faculty, develop a constitution and serve until such time as it can be adopted and put into operation.

Fourth, a standing committee of the faculty with which the council or central body can work directly is very desirable.

Fifth, full provision for communication on the part of the council or central body with the pupils is absolutely essential. The success of the council is dependent upon wide and effective publicity. A period in the school day can well be set aside when the council can meet with the home-room representatives and likewise when the representatives can meet with their constituency. This cannot be stressed too strongly.

After all these preliminaries there is still much to do to insure the success of the student organization. The matter of the choice of student council members is most important. Pupils should be encouraged to take an active interest in the election and in the choice of good, competent officers. They should look upon the school as a small community and the council members as their representatives. When the idea of the council is well understood and pupils have become interested, they will offer suggestions as to means of acquainting the student body with the candidates and their qualifications for office. They will suggest, for example, that candidates present themselves before the pupils in assembly or that class periods be devoted to the discussion of the necessary qualifications of a good council member; sometimes they will want to use the period for the discussion of candidates. Every opportunity to further this spirit should be welcomed. As a practical project in social science or in English the preparation for intelligent voting at the coming council election will not be easily surpassed. Those responsible for the success of the student council should see to it that the election of student council members becomes an event of great importance in the school.

The next most important consideration is to see that the council in the beginning attacks only such problems as it can solve. Let the beginning be simple. Let the council make good by handling its easiest problems first. It must be saved from defeat. The council in its early days must be able to say that it carries out everything it undertakes.

The council may well begin upon such problems as the order in the cafeteria or the waiting line, and the general conduct of pupils in the corridors. The problems must be simple, problems which the council can attack directly. It can pass from these to the larger projects of assembly control, management and control of social activities, athletics, boys' and girls' meetings, tardiness and irregular attendance, conduct in the classrooms, and the elimination of customs and traditions that are detrimental to the best interests of the school.

In the Lincoln High School the council in its first year asked that teachers be removed from duty in the lunchroom and in the corridors during lunch hours. It brought in a petition signed

by 1,290 pupils asking that the recommendation of the council be complied with. From that day to this no teacher has been on duty during the lunch hour. The result has been most gratifying; pupils eat and act like human beings; the waiting line is sometimes two hundred feet long, but there is no crowding or usurping of places. A short time ago the council discovered that some pupils were placing their books on the tables in the cafeteria, thus robbing others of a place to eat. The council attacked the problem at once. On the second day after the council made its appeal the number of cases was reduced to three, and the following day not a single pupil failed to respond to the suggestion.

As has been stated, one of the great dangers is that too much will be expected of the council before it becomes established. It must be safeguarded in every way possible. The pupils will sometimes consider the council a group of "pussy footers" and weaklings because they do so little. The student body must not be permitted to pass judgment too quickly. There is also danger that the council members themselves will become discouraged. They will sometimes be called the teachers' pets and criticized because they do not fight the battles of a particular group of pupils having some special interest or grievance. It will sometimes call for considerable restraint on the part of the faculty committee or the principal to prevent faculty interference when things seem to move too slowly.

But the council members should be let alone as long as they are making an honest effort. They may stumble along, sometimes fall, but democracy is an experiment even with adults. Who will say that we do not oftentimes flounder? Pupils will enter profoundly upon the solution of their problems. They will be in dead earnest; they will work in a spirit of co-operation with the faculty. Who will say that citizenship is not in the making through such practice?

## UNIFORMITY OF TEACHERS' MARKS VERSUS VARIABILITY

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The variability of teachers' marks as recorded in the form of letters or percentages has received a large amount of observation and investigation. Special study has been made of the variation of teachers' marks by having a large number of teachers estimate the same set of papers and evaluate the same set of questions, and by comparing the marks the pupils of various schools receive when brought together in the same school. From these studies it is concluded that the marks assigned by teachers in general are inaccurate measures of the abilities of pupils and are doubtful gauges for determining credit or promotion.

The conclusions of investigators that teachers' marks are an inaccurate means for determining merit must be definitely taken into account by any school which introduces a system of weighted credits. The Parkersburg High School established a policy of awarding six-tenths of a unit for each semester subject in which the pupil received a mark above 92 per cent, five-tenths of a unit for each with a mark between 80 and 92 per cent, and four-tenths of a unit for each with a mark between 71 and 80 per cent. The discussion which follows endeavors to present the effort made by the faculty of this school to discover and to rectify wide variations in marking, in order that the plan of weighted credits might at least approximate justice.

It is reasonable to expect all qualified teachers to give a pupil approximately the same mark for the same recitation unit. Further, it is reasonable to assume that the median ability of a large number of pupils is about the same as the median of any other similar group. Therefore, the median mark of all the pupils of one teacher should be approximately the same as the median



mark of the pupils of any other teacher in the general public high schools under the present classification of pupils.

To test this thesis take the median mark of the reports given out by each teacher; arrange the median marks numerically, and make a graph of the same. Figure 1 illustrates what will be found the first time such a record is made and presented to the teachers. Note Teacher No. 1 had a median mark of 93 per cent; Teacher No. 7, the first quartile, a median mark of 85

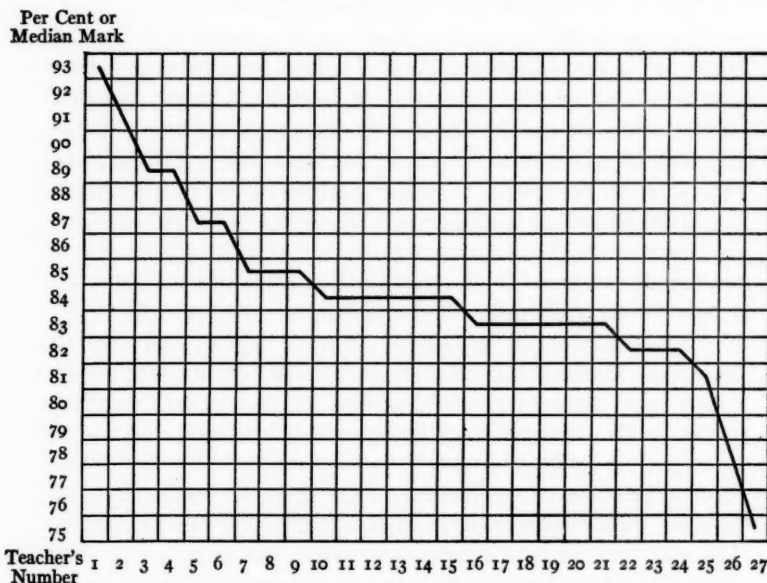


FIG. 1.—Median marks of the teachers of the Parkersburg High School for the first report.

per cent; Teacher No. 21, the third quartile, a median mark of 83 per cent; Teacher No. 27 had a median mark of 75 per cent. Although this graph seems to substantiate the reports of other investigators, the problem will bear further analysis. Certain questions at once present themselves.

Are the pupils of Teacher No. 1 better than those of Teacher No. 27? They were similar groups—therefore the medians should be similar.

Is Teacher No. 1 better than Teacher No. 27? She is considered about the same by the pupils and supervisors.

Are the standards of Teacher No. 1 higher than those of Teacher No. 27? They are not. Teachers seem to be well satisfied with the better pupils in each case.

The wide range in the medians must be on account of the different conceptions of the value of marks. Teachers with like conceptions of values would give similar marks for the same work.

Thus it becomes the principal's problem to unify the teachers' values for the respective marks. This uniformity can generally be brought about by two methods, the one mechanical, the other educational. The mechanical adjustment is a temporary expedient that will bring about a decided uniformity in the marks.

The median as shown by Figure 1 for all the teachers is 84, the quartiles 85 and 83 respectively. According to the thesis, qualified teachers would give the same mark for the same recitation

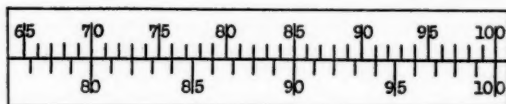


FIG. 2

unit; the median mark of a large number of pupils would be the same as the median mark of any similar group; it is reasonable to request all teachers with a median mark above the first quartile to lower their marks according to a scale; likewise, it is reasonable to have all teachers with a median mark below the third quartile raise all marks according to the scale. Scales are arbitrary; thus they can easily be constructed as in Figure 2. In other words, the pupil receiving the median mark of 75 per cent has a right to expect his mark to be raised to at least the third quartile, or 83 per cent. Thus Teacher No. 27 can readily translate all of his scores into marks that will be in accord with three-fourths of the other teachers. Likewise, Teacher No. 1 can use the scale as a "step down" transformer, lowering his median mark to that corresponding to the median of the teacher of the first quartile, then translating all his scores into marks. This being purely a

mechanical process or arbitrary method, the interesting effect on the teacher's conception of values is to be noted in the comparison of Figure 1 with Figure 3 which gives the second and third reports.

The extremes in medians no longer exist. They have been so modified and the range of variations so narrowed that the pupils now have the satisfaction of electing work or studies for a purpose,

Per Cent or  
Median Mark

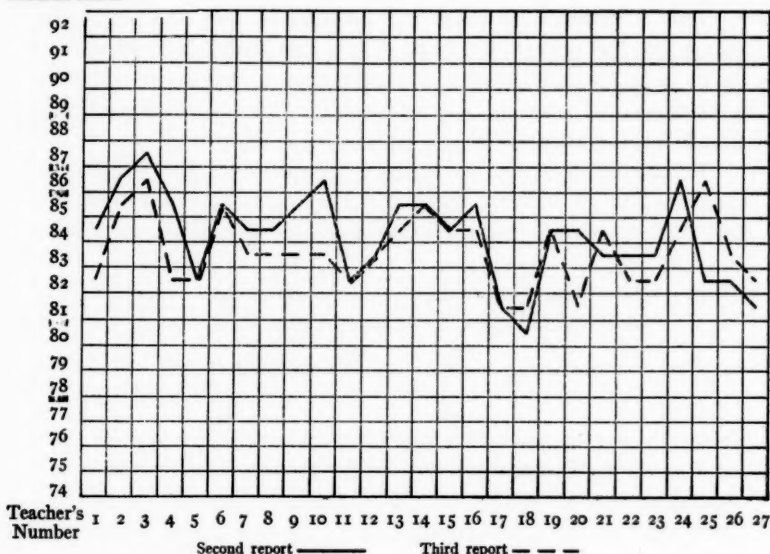


FIG. 3.—Median marks for the second and third reports of the same group of teachers as given in Fig. 1.

rather than the high marks that a particular teacher always gives, or on the other hand avoiding essential work because of a teacher's reputation for giving low marks. The fluctuations of the medians for the second and third reports are but normal and healthy signs that the teachers are not losing their individuality in marking.

The second stipulation, that of education, is fundamental, if any stable or lasting standards are to be established. The proper evaluation of work can probably be best arrived at through a

study of standardized tests and measurements. A study of standardized tests and measurements will not only develop definite requirements for the teacher but will give her an additional opportunity to secure the co-operation of the supervising principal in diagnosing class difficulties. The use of objective standards tends to eliminate the danger of marking or scoring the achievements of a class according to the relative work of the individuals composing that particular group. Further, the teacher acquires a truer conception of satisfactory achievements for each group of properly classified children.

Pupil and class difficulties, or lack of achievements, are diagnosed today by the average teacher or supervisor by methods similar to those of the physician of the nineteenth century in diagnosing a patient's ills. With the incoming of the exact sciences the day of "trial and error" passed in the medical profession. So it is today in the teaching profession with the incoming of scientific methods. Just as our forefathers got well in spite of the quack doctors, they learned the three R's in spite of their schools and teachers. The up-to-date teachers and supervisors of today, like the physician, are scientifically diagnosing the work of the school.

The mechanical or arbitrary method of developing uniformity of teachers' marks is only a temporary expedient that must give way to scientific methods of measuring achievements and diagnosis; the graphic illustration of the median marks of the teachers, however, has a permanent use in helping the new teacher coming into the system immediately to adjust the valuation of her marks to those of the school. The supervising principal, however, cannot be content with knowing only the quartiles and median marks of his teachers; he must know how every teacher arrives at the true valuation of the marks given. Just as our weights, measures, and time are standardized, so must the work in the school be standardized.

## HOME ECONOMICS COURSES AND THE HIGHER INSTITUTIONS OF LEARNING

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In any new field of education the line of demarcation between the parts of the subject which shall be administered in the various grades of schools, primary, secondary, and collegiate, is necessarily vague and shifting. Until the facts and processes worth teaching are thoroughly agreed upon, much that is useless, inefficient, and redundant will be dispensed in all of these schools and will be repeated *ad nauseam* from grade to grade. In no field has this been more strikingly illustrated than in that of home economics, and in none as yet has it been less successfully solved.

Because of the obvious social value of the object of home economics education its exponents have been able to secure the acceptance of any scheme for the accomplishment of that object which the fancy of the moment dictated. Many of these schemes, for example, the practice house, the catering and lunch-room commercialized class, the college cooking class, plainly of questionable educational value, have been enthusiastically tried in many places. In time such valueless schemes fall of their own weight, and sound devices take their place.

### THE DIVISION OF THE WORK IN THE SCHOOL SYSTEM

Among other questions confronting those who must solve problems of home economics education stands out prominently that of the assignment of the type and grade of work to be given under this name in the various schools. Not unnaturally in the beginning each home economics teacher assumed that her students were utterly untrained no matter where she found them, and so began at the beginning. Thus a girl might well find herself repeating almost exactly the same lessons in grade school, high school, normal school, college, or university. The excuse for this condi-

tion no longer exists, particularly in states which, like California, offer home economics instruction in nearly all the public schools. An orderly gradation or division of such instruction is surely necessary now if never before. It should no longer be possible for a bright student to complain, as one recently did to the writer, that she had had to test for starch with iodine in every food and science class she had been in from the fifth to the twelfth grade. One wonders whether any of this unfortunate child's teachers had added anything in the way of explanation, parallel, or use to the empirical fact thus established.

In the present article only the so-called household science courses are dealt with, partly because of the writer's familiarity with them, but chiefly because of their relative definiteness. Studies usually listed under household art share with other art courses a certain difficulty of division in subject-matter distinct from acquisition of skill. No detail is given in the present paper for the household science subjects as taught in primary and secondary schools, the discussion being concerned only with the distinctive features of such work in the higher institutions. Less attention so far appears to have been given to this latter phase of instruction in home economics.

#### THE EDUCATIONAL JUSTIFICATION OF HOME ECONOMICS INSTRUCTION

From the beginning no one disputed the wisdom or desirability of the training of girls in the technique of home duties. The question raised was rather as to the best time and place for such instruction and as to its educational status. In the days, perhaps too conclusively past, when so-called cultural subjects were considered the only possible content of high-school and college curricula, and Latin grammar and geometry were taught for the avowed purpose of inculcating accuracy, thoroughness, perseverance, and various other stern virtues in the student, practice in cookery or sewing was a pariah, a mere mechanical process of no educational worth. Our fashion in pedagogical psychology has changed, however, and we begin to believe that accuracy, observation, and thoroughness cannot be acquired in one field and carried over into all others at will. Perhaps our interpretation of the object of an expensive and elaborate system of public education has also changed. The

modern tendency is to expect direct and practical results, applicable to every situation and problem of living, from these years of instruction.

#### BALANCE BETWEEN PRINCIPLES AND PRACTICE

Whether these two conceptions of the object of schooling are antagonistic is an open question. Formerly education was said to prepare one for understanding and enjoying everyday sensations, for broadening the consciousness and extending the threshold of self backward through history, art, and ancient literature, forward through philosophy, poetry, and economics, and horizontally through science and mathematics. Now we expect this same breadth of vision, this same expanded self, to be developed through the history, art, economics, mathematics, and science involved in the study of a specific profession. Is there any real discrepancy in the two views? It is surely quite as possible for a girl to attain a scientific horizon by the properly directed study of the leavening effect of baking powder as by the study of the neutralization of sodium bicarbonate by potassium hydrogen tartarate, and of the rusting of iron and the tarnishing of silver as the oxidation of iron or the formation of silver sulfide.

The crux of the matter is no longer here, however, but in the vexed and misunderstood question of the adjustment of principles and application. If we are to train our students for usefulness in a particular field, we must give them information and practice in that field for the bald purpose of routine use. For instance, the dietitian must know certain facts about food values; she must have a reasonable amount of dexterity in handling cooking utensils; she must have an inkling at least of the modified diet used in abnormal conditions. These points she may get without the slightest understanding of the fundamental laws of nutrition, or of the chemistry of foods.

But skill with the tools of the trade and a glib familiarity with its current information make neither an educated individual nor an efficient workman. Beneath this must be underlaid an understanding of fundamental principles, developed judgment, independence of reasoning, and, in so far as it is humanly possible, a trace of that rarest and most precious quality of all, productive



originality. Perhaps an example will illustrate the tremendous gulf between these two methods of training for a profession. Analytical chemists, able to work with the most amazing accuracy and rapidity, are trained in the routine laboratories of some of the large factories. These men and women, taken from the office-boy class, in a few years acquire the dexterity necessary to the performance of all the analyses required in their particular laboratories. The head chemist and supervisors, however, are men trained in the universities. The office-boy chemist works well as long as no hitch in the process occurs, but is entirely useless when a new chemical problem obtrudes itself.

That the pendulum of educational fashion is swinging us dangerously close to the office-boy-chemist type of training is becoming increasingly apparent. Yet the criticism may justly be made that the enormous majority of our fellow-citizens are and must remain of the office-boy class of attainment. The grade school and even the high school must give much, if not most, of their time to the imparting of routine dexterity and information, if the years spent in them are to be considered direct preparation for the "job" of life.

Analysis of the curricula of even the most conservative of the old-fashioned academies will reveal that unconsciously this very thing was done. Enough Latin and Greek were taught to make it possible for the student in after years to puzzle out the etymology of a new English word; enough English and foreign literature to make the reading of the daily newspaper, the new novel, the literary magazine, a pleasure; enough physics to regulate the ice box, to explain the rainbow, or to set up the electric bell. Granted that secondary education must contain much that is frankly utilitarian, if the newer conception of education is to prevail, we have to consider the position of the college and the university in this respect. What proportion of time and emphasis shall application receive in these institutions as opposed to what is clumsily called theory?

#### HOME ECONOMICS AS VOCATIONAL EDUCATION

If we confine our discussion to the field of home economics, the matter will at least be more limited, if not simpler. The

fundamental notion underlying the introduction of home economics into the educational system is that home-making is the exclusive life-job of a very large majority of women. If this be granted, it simplifies tremendously the vocational training of girls in the grade and high schools. If 90 per cent of all schoolgirls are to be prepared for the same kind of work, that preparation can easily be made thorough, efficient, and economical from the point of view of the schools. As a matter of fact, this easy solution of the education of girls is no longer tenable, since women have taken on a wage-earning ambition and capacity, and home-making continues to be wageless. In the end this latter objection is seen to be only apparent, however, and not real, for after a few years of such wage-earning most women slip into their age-old wageless job in the home. This last statement is more particularly true of the great army of girls who go no farther than the eighth grade, and the lesser but still enormous number who drop out in the high-school years.

#### THE PURPOSES OF STATE-PROVIDED HIGHER EDUCATION

Where can the dividing line be drawn, then, between the acquisition of dexterity and the acquisition of a specialist's judgment? If such a line must be drawn, it must surely be found in the distinctive character and purpose of the college or university. The separation of the grade- and high-school field and spirit of teaching home economics from the field and spirit of the university home economics course should be quite as distinct as that between the casual hygiene course of the high school and the physiology and pathology work of the medical school. If the college and university degrees are to have a continued significance under our newer system of education, they must stand for knowledge of principles and the power to apply them to specific problems, rather than the parrot-like acquisition of ready-made applications. In home economics above all other subjects should this differentiation be carried out, if useless duplication and waste of time are to be avoided. If we consider the function of the state universities in particular to be primarily the production of specialists, in other words professional men and women, we must either confine the work of these institutions in home economics to a specialized scientific group of courses, or, acknowledging that the secondary

schools are not performing their task efficiently, we must present secondary-school work in addition. Surely the purpose of the state is the provision of instruction in the routine duties of the home and family to the girls in the primary and secondary schools. That the very small percentage of the total feminine citizenship who are able to avail themselves of university advantages should be equipped by the state with special thoroughness for the management of their individual homes seems an unfair distribution of public expenditure. This special adeptness in the individual home-making should be considered the desirable by-product of the training rather than the avowed object. The graduate of a university home economics course should be a specialist equipped with the technique and the responsibility of the professional woman. Thus she may carry on the work of enlightenment as a teacher of cooking, sewing, etc., in the primary and secondary schools, as a leader of home economics study among the older women of her community through the clubs, as a dietitian in hospitals or other institutions, as a social worker, an experiment station research worker, or in any one of half a dozen other ways. The main point is that she must be the head chemist, so to speak, of the whole feminine home-making works, to whom the office-boy routine analysts may go for instruction and for direction in emergencies.

#### PROFESSIONAL, RATHER THAN VOCATIONAL, COURSES

This conception of the function of the university home economics training necessarily modifies not only the curriculum presented to the four-year student but also the character and the content of the courses themselves. If ready-made applications of scientific principles to domestic matters are to give way to technical study of the principles themselves followed by individual applications, such courses as the so-called "Domestic Chemistry," "Household Chemistry," "Home Economics Chemistry," "Physics of the Household," "Economics of the Household," in so far as they take the place of fundamental training in the respective sciences, should be dropped from the curricula of colleges and universities. These courses are only too often purely descriptive, categorical, uninspired, and baldly informational. In the secondary schools in some cases they may be made satisfactory and desirable substitutes for the

usual mechanical grind of memory and arithmetic which make up so much of the science work. From the university point of view, however, it is questionable whether such applications, particularly in chemistry, can be made profitable unless preceded by at least two or two and one-half years of fundamental general work in the science. Fortunately the tide of popularity of these sugar-coated doses of science seems to be on the wane, and the sentiment is more general that applied science is only a waste of time, unless the student has first acquired a reasonable familiarity with the science to be applied.

#### "RELATED" SCIENCE AND ART COURSES

At this point it may not be irrelevant to mention the interpretation which has been offered in federal-controlled vocational education as to the place in the curriculum and the mode of teaching of these fundamental science and art courses. The principles to be taught are to be relegated to comparative obscurity in order that their obtrusion may not distract the student from the vocational applications, nor may those applications assume a broader field than that contemplated by the student at the moment. It is difficult to comprehend the specific object of such limitations in view of the large amount of time usually assigned to work in vocational technique. Some of these technical lessons might surely be enriched and rendered more effective and teachable by inclusion of just such explanations, leaving the general truths to be taught in the related science and art courses.

#### FOOD COURSES AS APPLIED SCIENCE

The claim of cookery or food courses to a place in the collegiate curriculum must depend upon the equilibrium which they maintain between fundamentals and empiricism. It may be admitted that any cooking lesson may be made a lesson in applied chemistry, physics, or physiology. If such cooking lessons are of professional intent and university rank, they must represent only chemical, physical, and physiological principles already familiar or to be made familiar through the application. Since it is now considered good pedagogy to begin the study of a far-reaching truth by means

of a specific application, the cooking lesson may be used to illustrate and vivify the process of scientific concentration. The difference again between the university and the secondary or present normal-school points of view, however, lies in the fact that in the former the study of the principle is emphasized in order that its every possible application to foods and cookery may be within the grasp of the student, while in the latter the applications are made as inclusive as is practicable, for the sake of their own individual value.

We have confused these two functions of advanced work in home economics almost inextricably. The insatiable appetite of the students for "explanations" of the common facts of food preparation and of nutrition, their impatience of theoretical drill, and their pathetic eagerness for authoritative and didactic statements on such matters combine to turn the food courses into descriptive memory tests no more worthy of the name of science than phrenology or faith healing.

#### KINDS OF FOOD AND NUTRITION COURSES OFFERED

The foods and nutrition courses offered in universities, colleges, and normal schools may be classified roughly as follows: (a) cookery; (b) food production and economics; (c) dietetics; (d) nutrition.

The definition and limitations of each of these four kinds of courses are easily worked out.

*Cookery courses.*—The cookery courses include for the most part the Freshman work and usually consist only of manipulation and more or less of descriptive material of the character included under the second heading. It is perhaps possible for such work to be standardized so as to maintain its place in the college curriculum, in case correlation with required high-school work cannot be made practicable. The fact remains that such standardization has not been carried out, and that the usual college Freshman or normal-school cookery course, no matter what it is called, and, unfortunately, no matter what the prerequisites for it may be, is only an extended high-school course. The answer to this criticism that the same remark holds true of chemistry, physics, and mathematics

courses is not entirely adequate if we remember the fundamental difference between pure science and applied science or manual arts.

*Food economics courses.*—The second class of food courses, those dealing with food economics and production, is fairly uniform. In so far as they consist of lectures and recitations, they seem to be of the same grade and nature as lower division descriptive courses in botany, geography, or history. Wherever laboratory work other than field trips accompanies these courses, it is ordinarily more cooking. The field trips, consisting of inspection excursions to factories, bakeries, markets, etc., constitute a pleasing variation for the students as well as an excellent pedagogical device. In this work a connection is made between the field of economics and that of chemistry and nutrition. The nature of the ground covered insures a more or less constant character and content of these courses. Meat, milk, cheese, eggs, vegetables, cereals, and fruits are the usual headings; and production, preservation, or adulterations, manufacture, sale, and uses are the subheadings. Not uncommonly these first two classes of courses, cookery and food economics, are found combined as laboratory and lecture work respectively in a single course. In 90 per cent of the twenty-one colleges of agriculture investigated by the writer some four years ago such courses carried either no prerequisites other than cookery, or not more than one year of chemistry.

*Dietetics courses.*—The third class of courses, called dietetics, is perhaps the most interesting of all, since its scope can be so easily made quite definite. The character of the preparation required of the student before she enters upon this course is exceedingly varied. In some cases no prerequisite at all is mentioned; in others, only home economics courses; in the majority, two years of chemistry are required, and usually also one or more terms of physiology or bacteriology. In certain cases so many and so varied are the prerequisites that one wonders what is left to be given under the heading of dietetics besides arithmetical practice in the calculation of dietaries. The economic and aesthetic phases of the work, as well as the consideration of various normal conditions of nutrition, may easily be spread out over a great deal of time without adding materially to the equipment of the student.



If the prerequisites, as well as the scope of a reasonable course called dietetics, could be agreed upon, much useless repetition could be avoided and a more rapid progress made toward standardization of the whole food and nutrition question. The first step in such an agreement should be as to the content of the course itself, rather than as to the number and kind of prerequisites. The latter must inevitably present themselves from a consideration of the former.

*Nutrition courses.*—The fourth class of instruction, grouped under the general heading nutrition, includes the advanced courses following the dietetics course, or in some cases just preceding it. Only a few institutions offered such work, six out of the twenty-one universities and colleges examined. The tendency in this class is toward metabolism work, feeding experiments, or more frequently seminar reading on modern nutrition topics. The number of students who avail themselves of these courses is small, and the total amount of such work offered is unambitious in view of the openness of the field for the training of experiment station and medical research workers along these lines which should be peculiarly attractive to women.

#### TWO-YEAR COURSES ONLY NECESSARY

All of the valuable material spread out in these courses, when preceded by well-regulated high-school work in foods and by properly chosen high-school and junior-college work in the pure sciences, may be administered in two-year courses given during the third and fourth years in the higher institution. One of these, food economics and analysis, should deal with all the questions of scientific and rational import concerned in the manufacture, control, and preparation of food for the market and for the table. Limitation to the problems of the housewife should be avoided, and the larger and more professional aspects of this work considered. The other course should cover the field of nutrition and its applications in the feeding of the race. Obviously, neither of these courses could be profitably offered to students in the junior college without impairing their professional value, since the foundations in chemistry, physics, physiology, and bacteriology must be laid during those years.



A well-known nutrition investigator asked me not long ago if I understood the psychology of that increasing number of young women who plunge into pseudo-research work without adequate preparation. I believe that at least one of the predisposing causes must be the scattering and misleading character of their home economics work in foods. Students are given, and asked to make, applications of physical chemistry when physical chemistry is scarcely a name to them. They deal with the chemistry of proteins and carbohydrates when they know nothing of the simplest laws and reactions of organic chemistry. It is undoubtedly unfortunate that the chemistry of foods and of nutrition should be among the most complicated chemical problems with which the chemist has to deal, but the fact remains, and cannot be blinked nor avoided in anything savoring of a professional college course. If time must be curtailed, let it be the time devoted to multiplying applications and not that given to explanation of principles. Better that the home economics specialist, and this should include the high-school teacher, should be able to make only one kind of salad dressing and understand the properties and nature of emulsions, than be able to make five kinds of dressing and define an emulsion as a form of cod-liver oil.

#### NORMAL-SCHOOL COURSES IN HOME ECONOMICS

It is plain that the two-year normal-school course which forms now the standard preparation of the elementary-school teacher of home economics must follow for the most part the secondary-school type of training in home economics. All that can be hoped for from these students is a greater degree of expertness in technical operations and a larger store of ready-made scientific explanations and applications than the high-school graduate has accumulated. Since the teaching of home economics in the elementary schools is mainly a matter of practice in mechanical processes and so-called habit-forming in connection with domestic routine, possibly the normal-school course of the type mentioned may serve well enough for the elementary-school teacher. No one will maintain, however, that such training is the optimum, although it may be the best that can be provided in the time allowed.

#### THE THREE-YEAR NORMAL-SCHOOL COURSE IN HOME ECONOMICS

The writer is of the opinion that if three years be given to this training, as is now contemplated in some institutions, a better scheme than the present one may be worked out. The first two years of such a course might well be devoted to regular junior-college courses of fundamental character, dealing with the primacies of scholarship, particularly in the sciences. A small part of the student's time during this period, perhaps three to six hours a week, might be given to the usual technical operations of cooking, sewing, laundry, etc. During the third year practice-teaching methods, intensive practice in routine processes, and so-called applications of the previous training might be introduced.

With such a plan in operation the student would be in a position at the end of her second year to choose between finishing her elementary training or going on to a higher institution to continue her collegiate work and to become eventually a high-school teacher or other type of professional person. Some students would, of course, desire to do both, with an interval of grade-school teaching. The present plan of instruction of the elementary home economics teacher renders her first two years' work worthless if she should wish to continue her education in the manner indicated.

#### THE FOUR-YEAR NORMAL-SCHOOL COURSE IN HOME ECONOMICS

The four-year normal-school course for high-school teachers of home economics as now enforced and as recommended by some state boards of education for the normal schools is identical in character with the two-year course formerly mentioned but includes, in addition, a wider range of subjects and provides greater adeptness with the hands. Unfortunately, since there is no pretense at maintaining the logical sequence of fundamentals and applications, the fourth year of preparation often required for qualification for high-school certification in home economics merely enlarges the familiar applications and leaves the graduate efficient enough in certain directions, but still definitely and hopelessly in the office-boy analyst class. This use of the four years given to schooling by the ambitious student seems to the writer indefensible. Enough time

is provided for the acquisition of such technique as may be needed for practice teaching and methods, and for the laying of the scientific foundations as well, if the course be wisely planned. But such a course has no place in the usual normal school because of the preponderance of work of less-advanced character which must be done in such schools. The faculty and equipment, usually of a type consonant only with the development of junior-college work or the usual elementary normal-school courses, are not adequate for senior-college and graduate problems. Even the four-year teachers' colleges cannot be expected to offer the best type of work during these years unless they form part of an institution containing well-developed pure science departments, and definitely co-ordinate their work with such departments.

#### THE HIGH-SCHOOL TEACHER OF HOME ECONOMICS

If the training of the high-school teacher is to be considered primarily the training of the specialist in the subject which is to be taught and secondarily the training in the method of teaching, then the normal-school preparation of high-school home economics teachers must be looked upon as inadequate. In most sections of the country this premise, already accepted for the academic subjects, has not been applied to "special" subjects. The list of special subjects usually includes art, music, physical education, and manual arts, as well as home economics. Agriculture was at one time quite generally placed in this list, and is still found there in some places.

The nature of the subject in home economics and agriculture is such as to allow the use of a large amount of scientific background in teaching and should certainly, in the high schools at least, not be limited to training in manual dexterity. One might coin a word, "scientiphobia," to express the extremes to which antagonists of this type of teaching have swung in recent years. Fear of the introduction of too much mental pabulum into the high-school curriculum seems to the writer unnecessary and unjustified by the history and present condition of these schools. The social and domestic preparation of the high-school student can only be strengthened by the scientific and general education of the teacher,

since modern domestic problems can no longer be considered as chiefly manual. The all-important economic and scientific use of purchasing power can be taught successfully only by mature and well-balanced university-trained or educated teachers.

Actual housekeeping experience is indeed valuable for these teachers, but only when that experience has been acquired in an analytical manner and in the light of carefully adjusted scientific study. Such experience is not indispensable but may be considered in the majority of cases almost inevitable.

The preparation of the high-school or college teacher of home economics should cover a longer period under more rigorous control, instead of a shorter period, than that of the teacher of the academic or basic subjects. For the same reasons, the teacher of agriculture, engineering, or any other applied-science courses, should be given fundamental as well as applied training, a condition which demands a longer period of schooling. Five or six years should be spent on this training, instead of the four now grudgingly and in detached style accorded to it.

#### SEPARATION OF DOMESTIC ART AND SCIENCE

Note should be made here of a corollary to the adoption of such a plan of teacher training. Specialists of the type contemplated would necessarily remain applied-science specialists and could not include in their attainments the equally thorough artistic education necessary for the domestic-art teacher. The teaching of these subjects in the high school should be separated, although they should be kept in the same department and vivified by the same social object. The domestic-art classes might well be combined with the drawing or art work by the well-qualified art teacher, and the domestic science combined if necessary with other science courses in the schedule of the domestic-science teacher. Until such a separation is generally accomplished amateur or one-sided instruction will continue to be given.

## Educational Writings

### REVIEWS AND BOOK NOTES

*A revised edition of Muzzey's "American History."*<sup>1</sup>—The great army of users of Muzzey's *American History* will be delighted to know that the author has made a real revision of his standard textbook. In fact, he has done more than revise some sections; he has actually rewritten them from the perspective of 1920. This is especially true of the narrative since the presidency of Roosevelt which is brought to the opening months of this year. A final chapter of 41 pages is devoted to America's part in the world-war. This includes a full discussion of our attitude in going to war, the problems we faced in its successful prosecution, and our attitude toward the Treaty of Versailles.

Changes in the earlier chapters of the book to accord fuller treatment to questions that have a bearing on contemporary problems include the following: more attention to industrial and commercial conditions at the opening of our history as a nation; more discussion of the immigration to the United States that was taking place about the middle of the last century; and a full treatment of the conditions and problems with which the country had to deal during the period that followed the Civil War.

Some of the outstanding features that the reader of the text in its new form will note are the emphasis on recent history and contemporary problems, the stress given to social and economic questions, the omission of minor happenings in the interest of a more adequate handling of essentials, the emphasis on causes rather than unrelated events, and the fascinating style that holds the reader's interest at all times.

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*Socialized civics.*—The demand for civics of the formal type is rapidly passing. Teachers are no longer content with texts in civics which emphasize the form of government at the expense of the function. Furthermore, there has grown up a demand during the past few years that the main object in teaching government should be "to inspire a respect for organized co-operation through government, and a willingness to do one's part in it." A book which

<sup>1</sup> DAVID SAVILLE MUZZEY, *American History*. Boston: Ginn & Co., 1920. Pp. lvi+537. \$1.96.

is planned on this basic idea has recently appeared.<sup>1</sup> It is the belief of the author of this text that pupils must work with government as well as study it and by so doing become interested in it. He also believes that mere interest is insufficient. Worth-while teaching of government must lay down and fix in the minds of the students a few of the accepted principles of sound political co-operation. Some of these principles which have been woven into the author's discussion are the short-ballot principle, the principle of civil-service reform, the principle of the executive budget, and the principle of responsible leadership.

The text is made up of five parts, each of which is an organic unit. Part I ("Elements of Self-Government") presents the elementary ideas of voluntary co-operation such as parliamentary law, the making of rules, the selection of officers, and the writing of constitutions. In Part II ("Self-Government in Cities") these elementary principles are applied to city government. A chapter each is devoted to the following topics: the world's work, the city, some public utilities, the disposal of waste, protection from fire and disorder, protection from disease, education and culture, the unfortunates, streets and parks, building zones or districts, travel and traffic, organizing the city government (two chapters), and the city's expenses. Part III ("Self-Government in States") presents the government of the states in much the same way as the government of the city is presented in Part II, but in less detail. Part IV ("Self-Government in the United States") deals with such topics as our federal government, the union and the constitution, business in the union, education and health, federal law, the federal constitution, colonies and self-government, our foreign relations, and the expenses of our federal government. Part V ("Some General Ideas about Self-Government") has a chapter each devoted to socialism and capitalism, parties and leaders, organized government, and real international law.

At the end of each chapter are suggestions and questions. These are intended to suggest ways of working with government. They are very much worth while. The appendix of 68 pages contains a model city charter, a model state constitution, a recall petition, a petition for referendum, an initiative petition, and a discussion of some principles of political organization. The book is sure to take its place among the few best ones in its field.

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*The Story of Modern Progress.*—Eighteen years ago West's *Modern History* appeared. A few years later his *Modern World* was published. Both of these books have had a successful career. The world-war and subsequent happenings, however, have made necessary a radical revision of all European history

<sup>1</sup> EDGAR DAWSON, *Organized Self-Government*. New York: Henry Holt & Co., 1920. Pp. xxiv+383.

textbooks. Professor West has taken advantage of this necessity and produced a book which is much more than a revision of his *Modern World*.<sup>1</sup>

Those familiar with the *Modern World* will recall that the first seventh of its contents contains a brief summary of earlier history. This feature has also been included in *The Story of Modern Progress*, one-sixth of the entire story being devoted to a survey similar to that found in the *Modern World*. Inasmuch as this summary included the Renaissance period it was necessary to give more space to it. The text proper begins with the Age of the Reformation and contains eleven parts. An unusual amount of space is given to English history. American history is omitted except where the connection of events demands its introduction. For example, the colonization of the seventeenth century, the intercolonial wars of the eighteenth century, America's industrial inventions in the nineteenth century, and our recent advance in world-politics are all treated from the viewpoint of world-development, and not from a restricted American position. Part XI is devoted to the war and the new age. It contains eight well-written chapters which in themselves are enough to commend the book to teachers of modern history. For a one-year course in modern European history there is possibly no better text on the market.

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*Pupil self-government.*—Modern civics teaching is demanding much participation on the part of the pupil. One way to get this desirable activity is through the introduction of student self-government into a class or a school. Some English experiments with this sort of thing have been published quite recently.<sup>2</sup> Besides narrating his experience in introducing classroom republics into his school the author of this little book discusses in some detail the advantages of the system and some objections to it. Some attention is also given in the last two chapters to the subject, "The School Republic." Those interested in the teaching of practical civics will find many helpful suggestions in Mr. Craddock's little book.

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*Teacher-training in Minnesota.*—The using of high schools for the training of country teachers has become quite prevalent in some sections of the country. For this reason a wide interest is sure to be shown in a recent publication in this field of endeavor.<sup>3</sup> Professor Coffman has made an exhaustive survey of the situation that existed in the teacher-training departments in Minnesota during the school years 1915-16 and 1916-17. Included in the report are

<sup>1</sup> WILLIS MASON WEST, *The Story of Modern Progress*. Chicago: Allyn & Bacon, 1920. Pp. xvi+733.

<sup>2</sup> ERNEST A. CRADDOCK, *The Class-Room Republic*. London: A. & C. Black, 1920. Pp. iv+80.

<sup>3</sup> LOTUS D. COFFMAN, *Teacher Training Departments in Minnesota High Schools*. New York: General Education Board, 1920. Pp. vii+92.



discussions of the history of the movement, the teachers and the students in the training departments, the curriculum, instruction, administration, finances, and what Minnesota superintendents think of the training departments. The Appendix contains among other things a valuable comparative table showing facts concerning training departments in fourteen states. Inasmuch as there are twelve hundred or more of these departments in existence today, a detailed discussion of conditions in one state will find a hearty welcome among those to whom such departments are intrusted in other states.

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*How to supervise instruction.*—Persons engaged in school supervision will be interested in a book which has recently appeared in this field.<sup>1</sup> Its author is the director of the Oread Training School of the University of Kansas. His broad training and large experience in the field of supervision give him the right to speak with some authority on an important phase of educational endeavor. With this training and experience as a basis Mr. Nutt has worked out his analytical discussion of the principles underlying classroom supervision and the devices and techniques which should, and which should not, be employed. Part I discusses the job of supervision, and Part II principles underlying the supervision of instruction. To the latter subject the great majority of the discussion is confined. Supervisory method, devices of supervision, and technique of supervision are the phases of the subject treated. Throughout the book the author makes much use of his personal experience in the training of young people for the teaching service. City-school supervisors and training-school directors will read the treatise with interest and profit.

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*A new book for college teachers.*—We have taken it for granted in the past that a college teacher knows how to teach. While we have known all the while that many of them were not as successful as others, little or no effort was put forth to assist the less efficient ones. There is, however, at the present time a disposition on the part of some college teachers to correct this undesirable state of affairs. They have united in placing on the market a book which is the first one of its kind ever to appear.<sup>2</sup> In all, thirty-one leading authorities, representing both large and small universities from every part of the country, have assisted in the endeavor. Part I is devoted to such topics as the history and present tendencies of the American college, professional training for college teaching, and general principles of college teaching. Part II tells how to teach the sciences. A chapter each is devoted to the teaching of biology, chemistry, physics, geology, mathematics, and physical education.

<sup>1</sup> HUBERT WILBUR NUTT, *The Supervisor of Instruction*. Boston: Houghton Mifflin Co., 1920. Pp. xvi+277. \$1.80.

<sup>2</sup> PAUL KLAPPER (Editor), *College Teaching*. Yonkers-on-the-Hudson, New York: World Book Co., 1920. Pp. xvi+583. \$4.50.

Part III has similar material on the social sciences and contains chapters on the teaching of economics, sociology, history, political science, philosophy, ethics, psychology, and education. Parts IV, V, and VI tell how to teach the languages and literature, the arts, and vocational subjects. Inasmuch as all of the contributors were selected because of their scholarship, their interest in the teaching phase of the subject, and their reputation in the academic world, what they have to say on the teaching of their special subjects should be of great value to actual and prospective college teachers.

*Rural school conditions in Ohio.*—Inasmuch as there are in the United States at present approximately 215,000 one-room rural schools, a study of these schools in one state should interest a large body of school people.<sup>1</sup> This study contains the findings of the state-wide school survey that was made in Ohio during the summer and fall of 1913. It has sections devoted to legislative history, the one-room school, supervision, centralization and consolidation, community activities and extension work, the rural high school and the county normal school. Some of the outstanding things disclosed by the survey were: (1) not over half of the teachers in the rural schools were graduates of high school; (2) 60 per cent of the teachers in the one-room rural schools had taught five years or less; (3) nearly half of the teachers whose schools were surveyed had no professional training whatever; (4) the rural schools were poorly provided with educational, social, and sanitary equipment; (5) there was no uniformity as to records and reports; (6) many boards of education were breaking the school law in a variety of ways. The findings resulted in a new code of school laws. How these new laws are working out in practice is described in the report. The study as a whole should be of great interest to all persons in any way concerned with the problems of rural education.

*Living or preparation for life.*—In the growing list of experiments in the reconstruction of the elementary-school curriculum, that conducted in the University Elementary School at Columbia, Missouri, by Professor J. L. Meriam, is a conspicuous one, and represents perhaps as radical a departure from the conventional curriculum as any. It attempts a complete abandonment of the course of study organized in terms of the three R's or other conventional subjects, and the use of one in which the several features are distinguished only by the activities and attitudes of the pupils, the material being taken from the child's natural and social environment without intermediate organization as subject-matter. It would make the elementary-school work life, and not preparation for life, conceiving its purpose to be: "To help boys and girls do better in all those wholesome activities in which they normally engage."

<sup>1</sup> VERNON M. RIEGEL, *A Study of Rural School Conditions in Ohio*. Columbus, Ohio: Department of Public Instruction, 1920. Pp. 175.

In *Child Life and the Curriculum*,<sup>1</sup> Professor Meriam sets forth in great detail all the charges against the traditional curriculum, explains the philosophy underlying the experiment he is conducting, and elaborates a set of principles for curriculum-making. He presents clearly and fully the workings of the University Elementary School, and gives a comparison of the attainments of pupils who have gone from it into high schools with those of other pupils in those high schools, indicating that mastery of the "tool" subjects may be quite as efficient when they are dealt with incidentally as phases of normal child-life activities as when they are made the object of direct attack.

He believes that the problems of minimum essentials and of motivation disappear entirely when the curriculum is selected directly from real life and is directed "to enabling boys and girls to be efficient in what they are now doing," and only secondarily to preparing them to be efficient later. The use of games in class work he condemns as the prostitution of the higher value to the lower, play being "a phase of life co-ordinate with work," the effectiveness of which the school must seek to promote. Measurement of educational results, he thinks, must be, like the curriculum itself, in terms of life-activities in normal settings, the standardization of accomplishment with reference to isolated abilities being not only not significant but even dangerous.

A review of the illustrative outlines of material used in observation, as given in the book, leads one to feel that underneath them there lies some more specific basis of selection than is stated in the author's "principles of curriculum making"—that decision as to what phases of the child's environment shall receive the school's emphasis is not unrelated to the general preparation for adult activity, the principle which in spite of mistakes in application is responsible for the traditional curriculum. One may doubt if the author gives adequate consideration to the element of habituated response in education; may find some of his conclusions from well-known studies in the field of education surprising; and may be unwilling to see measurement deferred until after the attainment of seemingly impossible conditions. Nevertheless he will recognize in the book and the experiment it reports a contribution to the great effort to provide a curriculum more closely related to life, more fully recognizing the principle of self-activity, and more truly a part of normal childhood.

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*Common-sense suggestions for the inexperienced teacher.*—With the intent to make the content "specific direction" rather than "a general discussion of educational principles," Superintendent H. E. Waits, in *Practical Problems of the School*,<sup>2</sup> gives a thoroughly common-sense discussion of such matters as

<sup>1</sup> JUNIUS L. MERIAM, *Child Life and the Curriculum*. Yonkers-on-the-Hudson, New York: World Book Co., 1920. Pp. xii+538. \$3.60.

<sup>2</sup> HARMON EBERT WAITS, *Practical Problems of the School*. Chicago: Benj. H. Sanborn & Co., 1920. Pp. xxxiii+278.

first-day routine, discipline on playground and in classroom, punishment, the conduct of the recitation, the teacher's relation to the community, etc. While the book reflects nothing of recent educational science, it is a clear presentation of orthodox and conservative school management. The author's insistence, in the whole of a final chapter, on greater emphasis on oral reading in the upper grades represents conservatism perhaps even more than orthodoxy.

*For the rural-school trustee.*—There has been an abundance of criticism of the country-school trustee. Not a few of the ills of the country school have been charged to his incompetence. Some efforts to aid him have been made through institutes and similar meetings, and a considerable literature has been put at the disposal of his colleague of the city through periodicals and books as well. President Showalter's *A Handbook for Rural School Officers*<sup>1</sup> is, however, rather unique in its effort to give the country trustee a comprehensive discussion of his duties, and the view of school problems necessary to their efficient performance. Very helpful indeed are the discussions of the local school organization to those of larger scope, of the proper transaction and recording of school-board business, of the importance of making a school budget, of cautious procedure in selecting a teacher, and of making the school a center in the community so that its leadership may be effective in securing its own improvement. Other chapters deal with consolidation, "redirected education," the place of home economics, manual training, and agriculture in the rural school, and of advantages which are only beginning to be thought possible in such a school. Appendix features are several score cards for rating rural schools and suggestions for community meetings.

*The Administration of Village and Consolidated Schools.*—Another field not a little neglected in professional literature is the village school. Much has been written concerning the rural school, and more that is written seems to presuppose urban conditions everywhere. Ross L. Finney, assistant professor of educational sociology in the University of Minnesota, and Alfred L. Schafer, state high-school inspector in North Dakota, attempt in the present volume<sup>2</sup> to "translate" present-day thought on school administration into terms applicable to the conditions of the village and the consolidated school. Though the book is not large, its scope is broad, dealing briefly with almost all the phases of the conduct of such schools. In its general way, it should prove helpful to principal and superintendent and will point him to the more detailed studies he will need to know if he attempts the activities the authors suggest.

<sup>1</sup> N. D. SHOWALTER, *A Handbook for Rural School Officers* ("Riverside Text-books in Education"), edited by Ellwood P. Cubberley. New York: Houghton Mifflin Co., 1920. Pp. xiii+213.

<sup>2</sup> ROSS L. FINNEY and ALFRED L. SCHAFER, *The Administration of Village and Consolidated Schools*. New York: Macmillan Co., 1920. Pp. xi+298. \$1.60.

*Education and the General Welfare.*<sup>1</sup>—By this title and a subtitle, *A Text-book in School Law, Hygiene, and Management*, Professor Sechrist describes a rather unusual combination of material, presented in a valuable way. The social significance of the school as a part of community life, the provisions for social control and support, including the related topics of child labor and school attendance, are excellently presented. The sections of the book on school hygiene and management constitute a thorough study of the school population in terms of individual differences, physical well-being, and the fundamentals of social and child psychology on which constructive discipline rests. The combination of subject-matter lessens somewhat the impression of unity that the book might present, and the abundance of tabular material is perhaps not given ideal typographic treatment. Nevertheless, the viewpoint, content, and objective treatment mark the volume as a new and valuable type of treatment of school management—one finding its principles in sociology and psychology and utilizing the findings of educational research, without sacrifice of applicability to the everyday problems of the teacher.

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*Sane guidance.*—More and more generally it is accepted that on the high school there rests an only recently realized responsibility for the guidance of its pupils. Whether it results because the typical home has become less efficient in such matters, or because the new high-school population includes great numbers who come from the sort of home that was never able to counsel wisely on life-problems, or because the increasing complexity of the social and industrial environment of the youth of today makes necessary an expert and professional type of advice not so urgent in the past—whatever the reason—there is an emphasis today on moral, vocational, and educational guidance that is new in the list of the school's responsibilities.

Along with the emphasis on the responsibility and with studies intended to prepare counselors, there is coming also a list of books addressed directly to the high-school student and intended to supplement the personal work of the teacher.

Such a book, based on long and intimate relations with high-school and college boys, dealing with very real problems, and couched in a most readable style, is Dean Clark's *The High School Boy and His Problems*.<sup>2</sup> It is concrete in every paragraph, reminiscent, replete with glimpses of real boys facing actual situations. Dean Clark believes that success and happiness in a chosen field are, except in unusual cases, more dependent on character and efficiency which the individual makes for himself than on special aptitudes or exceptional

<sup>1</sup> FRANK K. SECHRIST, *Education and the General Welfare*. New York: Macmillan Co., 1920. Pp. xvii+443. \$1.60.

<sup>2</sup> THOMAS A. CLARK, *The High School Boy and His Problems*. New York: Macmillan Co., 1920. Pp. vii+194.

ability. He seeks to dispel the myth concerning the advantages of the student who works his way through college. But almost as important as is its content is the fact that it promises to win a reading from the high-school boy to whom it is addressed.

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*Mathematics in the junior high school.*<sup>1</sup>—The first book in this series is a course in arithmetical calculation. It contains a wealth of business applications and the simple elements of bookkeeping, but omits much of the customary business arithmetic that the pupil cannot understand and for which he sees no real need. The graph and some work in formulas are introduced.

Mensurational arithmetic is the basis of the second course. The usual formulas are developed. There is much construction work with ruler and compass. Relations between angles in polygons and in parallel lines are worked out. Such material is not only concrete but interesting and valuable to the pupil. Although it is for the most part a geometry, the book contains some considerable practice work in arithmetic. Algebraic processes are also introduced with the study of formulas.

The third book is largely algebra, with the geometry used to illustrate the processes, and some trigonometry in applications. The last chapter takes up some demonstrative geometry with complete proofs of several theorems to prepare the way for future logical geometry.<sup>2</sup>

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*Ninth-year mathematics.*—The course of study submitted by the authors of a recent textbook in mathematics<sup>3</sup> is based upon the assumption that the mathematics of the ninth grade will be the last year required. Hence, they aim to include "all the fundamental mathematical notions" which can be taught in one school year and to the children of that grade of maturity. They have included the use of letters to represent numbers, the use of the simple equation, the construction and evaluation of formulas, the finding of unknown distances, tables and graphs, because of the "social worth." In eliminating a large amount of meaningless manipulations, such as is usually found in courses in algebra, they hope to increase the "training value" by substituting for this work a large amount of problem solving.

Among the special features of the course are careful explanations, timed practice exercises, and a chapter on statistical tables and graphs.

<sup>1</sup> MARIE GUGLE, *Modern Junior Mathematics*. New York: Gregg Publishing Co., 1919. A series of three books for the seventh, eighth, and ninth grades.

<sup>2</sup> This and the following reviews were contributed by E. R. Breslich, University High School, University of Chicago.

<sup>3</sup> HAROLD O. RUGG and JOHN R. CLARK, *Fundamentals of High School Mathematics*. Yonkers-on-the-Hudson, New York: World Book Co., 1919. Pp. xv+368.



*An introductory course in mathematics.*<sup>1</sup>—In the selection of the material the authors of a recent book in general mathematics aimed "to obtain a composite introductory course in mathematics that all future citizens of our democracy should be required to take as a matter of general scholarship."

Accordingly, in addition to the formal work of algebra and the solution of problems by algebraic methods we find chapters on measurement, angle relations, the formula, statistics and graphs, similarity of figures, logarithms, the slide rule, and trigonometric functions. A pupil who has studied such a course cannot fail to be impressed by the large variety of mathematical applications and must recognize the value of the study of mathematics.

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*Industrial and commercial mathematics.*—*Applied Mathematics*<sup>2</sup> is intended for use in the junior high school or in the senior high school. It is a course in arithmetic emphasizing the industrial and commercial applications. It contains an extensive discussion of the mensuration of the common figures and solids, introducing some algebraic manipulations in connection with the formulas. There is an interesting brief chapter on the use of tables, one on agricultural problems, and one on mechanical applications.

The book is made unusually attractive by means of a large number of illustrations and maps.

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*An algebra for beginners.*—A characteristic feature of a book in algebra<sup>3</sup> is the division of each chapter in two parts. It is recommended that all the first parts be studied before the second parts are taken up, thus reviewing and extending the work of the first part in each chapter.

The authors submit a device for facilitating the solution of verbal problems, and to improve the arrangement of written work. Such devices should prove helpful to the pupil.

Graphical representation and interpretation are used freely. The subject-matter of algebra for first-year high-school pupils is reduced by omitting difficult types of factoring, complex fractions, exponents other than positive, and other topics where omissions have been advocated during recent years. The space gained is filled with graphical work and the study and use of formulas.

<sup>1</sup> RALEIGH SCHORLING and WILLIAM D. REEVES, *General Mathematics*. Boston: Ginn & Co., 1919. Pp. xiv+488.

<sup>2</sup> EUGENE H. BARKER, *Applied Mathematics*. Boston: Allyn & Bacon, 1919. Pp. viii+247.

<sup>3</sup> FLETCHER DURELL and E. E. ARNOLD, *First Book in Algebra*. New York: Charles E. Merrill Co., 1919. Pp. v+325.



## CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY,  
AND PRACTICE

- ALLEN, CHARLES R. *The Instructor: The Man and the Job*. Philadelphia: J. B. Lippincott Co., 1919. Pp. vii+373. \$1.50.
- AYRES, LEONARD P. *An Index Number for State School Systems*. New York: Russell Sage Foundation, 1920. Pp. 70. \$0.75.
- BRIGGS, THOMAS H. *The Junior High School*. Boston: Houghton Mifflin Co., 1920. Pp. x+350. \$2.00.
- COFFMAN, LOTUS D. *Teacher Training Departments in Minnesota High Schools*. New York: General Education Board, 1920. Pp. viii+92.
- CRADDOCK, ERNEST A. *The Class-Room Republic*. London, England: A. & C. Black, Ltd., 4 Soho Square, 1920. Pp. 80.
- GRIFFITH, IRA SAMUEL. *Teaching Manual and Industrial Arts*. Peoria, Illinois: Manual Arts Press, 1920. Pp. 229. \$2.00.
- HOLLINGWORTH, LETA S. *The Psychology of Subnormal Children*. New York: Macmillan Co., 1920. Pp. xix+288.
- KIRKPATRICK, EDWIN A. *Imagination and Its Place in Education*. Boston: Ginn & Co., 1920. Pp. x+214. \$1.48.
- MERIAM, JUNIUS L. *Child Life and the Curriculum*. Yonkers-on-Hudson, New York: World Book Co., 1920. Pp. xii+538. \$3.60.
- NUNN, T. PERCY. *Education: Its Data and First Principles*. Edited by A. A. Cock. New York: Longmans, Green & Co., 1920. Pp. vii+224. \$1.90.
- NUTT, HUBERT WILBUR. *The Supervision of Instruction*. Boston: Houghton Mifflin Co., 1920. Pp. xvi+277. \$1.80.
- Proceedings of Educational Congress, November 17 to 22, 1919*. Harrisburg, Pennsylvania: Department of Public Instruction, 1920. Pp. 671.
- RIEGEL, VERNON M. *A Study of Rural School Conditions in Ohio*. Columbus, Ohio: Superintendent of Public Instruction, 1920. Pp. 175.
- SHOWALTER, N. D. *A Handbook for Rural School Officers*. Boston: Houghton Mifflin Co., 1920. Pp. xiii+213. \$2.00.
- STOCKTON, JAMES LEROY. *Project Work in Education*. Boston: Houghton Mifflin Co., 1920. Pp. xiv+167.
- TERMAN, LEWIS M. *Condensed Guide for the Stanford Revision of the Binet-Simon Intelligence Tests*. Boston: Houghton Mifflin Co., 1920. Pp. 32. \$1.00.
- TERMAN, LEWIS M. *Terman Group Tests of Mental Ability for Grades 7 to 12*. Yonkers-on-Hudson, New York: World Book Co., 1920. 25 booklets. \$1.60.
- WAITS, HARMON EBERT. *Practical Problems of the School*. Chicago: Benj. H. Sanborn & Co., 1920. Pp. xxxiii+278.

- WETMORE, FRANCES K. *A First Book in English for Non-English Speaking Adults*. Chicago: Chicago Association of Commerce, 1920. Pp. 93. \$1.10.

BOOKS PRIMARILY FOR HIGH-SCHOOL TEACHERS AND PUPILS

- ATKINS, HENRY GIBSON, and HUTTON, H. L. *The Teaching of Modern Foreign Languages in School and University*. Edited by A. A. Cock. New York: Longmans, Green & Co., 1920. Pp. viii+246. \$1.90.
- BALL, KATHERINE F., and WEST, MIRIAM E. *Household Arithmetic*. Philadelphia: J. B. Lippincott Co., 1920. Pp. 271.
- BARKER, EUGENE HENRY. *Applied Mathematics*. Boston: Allyn & Bacon, 1920. Pp. viii+247.
- BLACK, N. HENRY, and CONANT, JAMES BRYANT. *Practical Chemistry*. New York: Macmillan Co., 1920. Pp. x+474.
- BLASCO IBANÉZ, VICENTE. *La Batalla del Marne*. Edited by Frederico de Onís. Boston: D. C. Heath & Co., 1920. Pp. xi+201.
- CLARK, THOMAS ARKLE. *The High School Boy and His Problems*. New York: Macmillan Co., 1920. Pp. vii+194.
- HENRIQUEZ URENA, PEDRO. *Tablas Cronologicas de la Literatura Española*. Boston: D. C. Heath & Co., 1920. Pp. v+73. \$1.00.
- HITCHCOCK, ALFRED M. *Junior English Book*. New York: Henry Holt & Co., 1920. Pp. xii+442.
- LORD, GEORGE P. *Rational Arithmetic*. New York: Gregg Publishing Co., 1920. Pp. viii+151. \$1.20.
- MAPES, E. K., and DE VELASCO, M. F. *Cuba y los Cubanos*. New York: Gregg Publishing Co., 1920. Pp. viii+213. \$1.00.
- MILLIKAN, R. A., GALE, H. G., and PYLE, W. R. *Practical Physics*. Boston: Ginn & Co., 1920. Pp. x+462. \$1.64.
- MUZZEY, DAVID SAVILLE. *An American History*. Boston: Ginn & Co., 1920 (revised edition). Pp. x+537+xlvi. \$1.96.
- PARKER, SAMUEL CHESTER. *Methods of Teaching in High Schools*. Boston: Ginn & Co., 1920 (revised edition). Pp. xxvii+529. \$2.00.
- PEARL, RAYMOND. *The Nation's Food: A Statistical Study of a Physiological and Social Problem*. Philadelphia: W. B. Saunders Co., 1920. Pp. 274. \$3.50.
- POULSON, M. W. "Conditions and Needs of Secondary School Libraries in Utah," *Bulletin of the University of Utah*, Vol. X, No. 4, August, 1919. Salt Lake City, Utah: University of Utah. Pp. 46.
- RICHARDS, CLAUDE. *The Man of Tomorrow*. New York: Thomas Y. Crowell Co., 1917. Pp. 296.
- SNEDDEN, DAVID. *Vocational Education*. New York: Macmillan Co., 1920. Pp. xl+587.
- Spanish-American Short Stories*. Edited by Charles Alfred Turrell. New York: Macmillan Co., 1920. Pp. ix+201.

- WARD, C. H. *Theme Building*. Chicago: Scott, Foresman & Co., 1920.  
Pp. xii+562.
- WEST, WILLIS MASON. *Modern Progress*. Boston: Allyn & Bacon, 1920.  
Pp. xvi+701+32.
- WILKINS, LAWRENCE A. *Second Spanish Book*. New York: Henry Holt & Co., 1920. Pp. xiv+446. \$1.48.

PUBLICATIONS OF THE UNITED STATES BUREAU OF EDUCATION AND  
SIMILAR MATERIAL IN PAMPHLET FORM

Recent issues of the Bureau of Education:

- Bulletin No. 61, 1919—*Public Discussion and Information Service of University Extension*.
- Bulletin No. 63, 1919—*Natural Science Teaching in Great Britain*.
- Bulletin No. 11, 1920—*Statistics of State School Systems, 1917-18*.
- Bulletin No. 15, 1920—*Monthly Record of Current Educational Publications*.
- Indian Education in 1918-19*. Calcutta, India: Superintendent Government Printing, 1920.
- Handbook of Simplified Spelling: Part 2, "The Case for Simplified Spelling,"*  
Part 3, "Rules and Dictionary List." New York: Simplified Spelling Board, 1 Madison Avenue, 1920.

MISCELLANEOUS PUBLICATIONS

- CLAPP, JOHN MANTLE, and LEE, JAMES MELVIN. *Language for Men of Affairs:*  
I. *Talking Business*, pp. xxxiii+526. II. *Business Writing*, pp. xxii+611.  
\$8.00.
- Comrades in Play*. New York: Community Service, 1 Madison Avenue, 1920.  
Pp. 84.
- GRANDGENT, CHARLES HALL. *Old and New: Sundry Papers*. Cambridge,  
Massachusetts: Harvard University Press, 1920. Pp. 177.
- OLGIN, MOISSAYE J. *A Guide to Russian Literature*. New York: Harcourt,  
Brace and Howe, 1920. Pp. xiv+323.
- School Center Gazette, 1919-20*. Compiled by Clarence Arthur Perry. New  
York: Russell Sage Foundation. Pp. 53. \$0.25.
- The School Hymnal*. Edited by Milton S. Littlefield. New York: A. S.  
Barnes Co., 1920. Pp. x+310.
- SELIGMANN, HERBERT J. *The Negro Faces America*. New York: Harper &  
Brothers, 1920. Pp. 319. \$1.75.
- Standards for City Church Plants*. New York: Interchurch World Move-  
ment of North America, 1920. Pp. 75.

